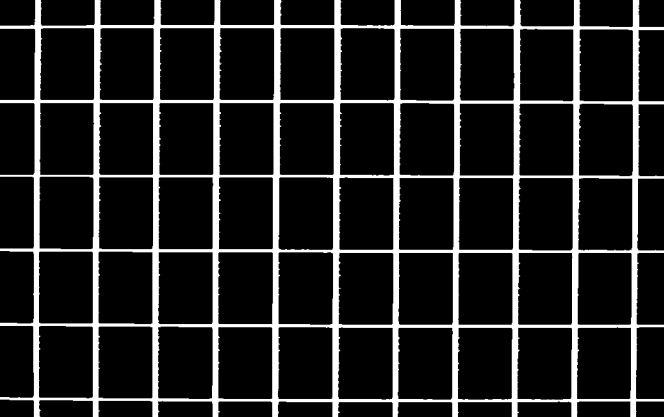
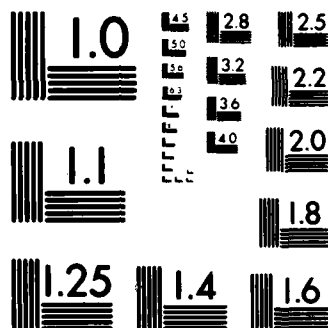


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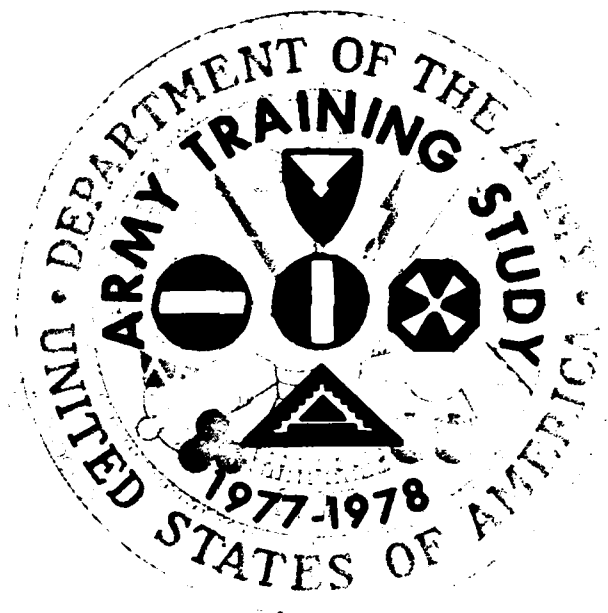
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~~DRAFT REPORT FOR STUDY GROUP~~

ARMY TRAINING STUDY

The contents of this draft report are those of the study group and should not be construed as an official Dept of Army position unless so designated by other official documentation.

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REPORT DOCUMENTATION PAGE

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<p>The Army Training Study (ARTS Study) conducted a comprehensive overview of Army training issues as the study group sought a broad perspective of army training. The study group conducted field surveys at numerous continental US Army posts and schools. The data obtained was analyzed using the Training Effectiveness Analysis (TEA).</p> <p>The Administration Volume documents and explains the guidance received by the study group and the administrative procedures and the milestones used by the study group in their conduct of the study.</p>				
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION <u>Unclassified</u>	
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ADMINISTRATION

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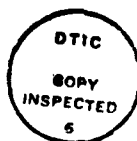
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PREFACE

The Administration Volume contains guidance given to the Army Training Study Group in the form of a DA-staffed Study Directive; five Study Advisory Group meetings chaired by Commander, TRADOC; various Study Group orientation sessions during the period 25-29 October 1977; twelve Senior Officer Discussions; and three Concept Paper Seminar sessions. Additionally, this volume outlines Consultant Group meetings; study group organization; study group visits to various TRADOC institutions, field units, and analytical agencies; and budget expenses incurred during the study as well as projected expenses for FY 79.

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CHAPTER I

STUDY DIRECTIVE

1. Chapter I contains the draft study directive, dated 6 October 1977, as changed by a 29 November 1977 Director of Army Staff letter, and acknowledged by a 13 December 1977 letter from the TRADOC Chief of Staff.
2. It should be noted that the guidance and Essential Elements of Analysis outlined in the study directive were modified by the Study Advisory Group guidance contained in chapter II, pages II-12 through II-21.

HEADQUARTERS
UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
OFFICE OF THE CHIEF OF STAFF
FORT MONROE, VIRGINIA ~~22060~~ 23651

AITNG-TDD-P

13 DEC 1977

Dear General McGiffert,

I received your letter approving the Army Training Study (ARTS) draft directive. We reviewed your comments with Brigadier General Rick Brown and have incorporated your suggested changes.

We will provide budget justification data coming from ARTS as a matter of priority. We share your concern that the command prerogatives of training management are not sacrificed to satisfy the demands of statistical analysis.

ARTS is a most comprehensive attempt to get to the root of training effectiveness analysis. Each year, training costs become more difficult to justify. I am optimistic that the data we can collect developing the relationship of training proficiency to combat effectiveness will produce a more solid analytical basis on which to defend training costs.

Sincerely,

Bob

ROBERT C. HLXON
Major General, GS
Chief of Staff

Lieutenant General John R. McGiffert
Director of the Army Staff
United States Army
Washington, D.C. 20310

Copy furnished:
Brigadier General Frederic J. Brown, III
Director, Army Training Study (ARTS)
Building 734
Fort Belvoir, VA 22060



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF STAFF
WASHINGTON, D.C. 20310

29 November 1977

Dear Bob:

The Army Training Study (ARTS) draft directive has been reviewed and is approved. Minor suggested changes are attached as an inclosure. A few key points warrant comment.

ARTS should serve as a catalyst in the development of a central thrust for current and future efforts. As such, the study group should concentrate on developing the relationship of resources to proficiency. The use of war games to link training proficiency to combat effectiveness should be explored but may prove to be marginally productive.

Demands for improvements in budget justification are stringent. Interim justification data which can be provided by ARTS at appropriate times in the PPBS cycle will be extremely valuable. In this regard, the Comptroller of the Army should be represented on the Study Advisory Group, and consideration should be given to convening this group on a bi-monthly basis for the first six months.

It is recognized that specific support requirements for the Operating Commands have not yet been identified. Due to other high priority missions, these requirements should be negotiated on a mutually agreeable basis between the interested parties. As indicated in the study directive, requirements deemed critical to the success of the study which cannot be resolved should be referred to DA DCSOPS.

We must ensure that the command prerogatives of training management are not sacrificed merely to satisfy the demands of statistical analysis. Mandatory training requirements could result in event driven training programs of the ATP/ATT era. This type approach cannot be allowed to degrade the concept of sustained training proficiency which TRADOC has diligently developed during the last few years.

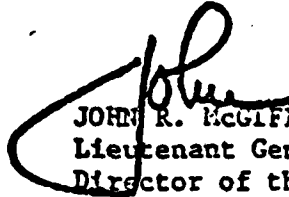
We must also ensure that the training systems which are developed in a peacetime environment will still function after D+1. In determining the optimum mix of individual training in the training base and in the force, impacts of increased training responsibilities in the institutions as well as in the force should be assessed.

29 November 1977

Long-term study efforts should be focused on the Army of 1984-1985, to include the challenges of Hi/Lo equipment mix and other constraints imposed on manning, equipping, and sustaining the forces. The DCSOPS initiated SSI study to depict the characteristics of the future will assist your efforts.

The ARTS effort has the potential for providing a great service to the Army. You have my continuing support.

Sincerely,



JOHN R. MCGIFFERT
Lieutenant General, GS
Director of the Army Staff

1 Incl
as

Major General Robert C. Hixon
Chief of Staff
US Army Training and Doctrine Command
Fort Monroe, Virginia 23651

Minor Changes to ARTS Study Directive

<u>Item</u>	<u>Page</u>	<u>Para</u>	<u>Line</u>	<u>Change</u>
1	1	2	1	AFTER ... Training Study (ARTS) ADD: (Category 3, Operations and Force Structure REASON: Identifies study category.
2	1	3	9	AFTER ... clearly in mind. ADD: "The ARTS addresses the FY 78 Study Planning Guidance (SPG) Priority Problem Area C, Army Readiness, and has been designated a priority study in the FY 79-80 SPG to be published by HQDA REASON: Provides additional background information
3	1	7a	2	CHANGE: ... the Army ... TO READ: ... the Total Army ... REASON: Ensures inclusion of Reserve Components.
4	5	7e(5)	3	AFTER ...contingency scenario ADD: ,in another environment such as Korea, REASON: Emphasizes interest in another important contingency area.
5	7	7f(4)	1	AFTER ... of NATO ADD: and ROK. REASON: Enhanced interoperability with all allies is vital.
6	12	8f(4)	2	AFTER ... resources (i.e., ADD: personnel, REASON: Training resources include personnel, and reductions in this particular resource will impact on training proficiency.
7	14	8i		ADD Subparagraph: (3) Serves as a member of the SAG. REASON: Comptroller representation on the SAG deemed essential due to resource implications of the study.
8	14	8o	1	CHANGE: ACSI. Validates threat ... TO READ: ACSI. Arranges for validation of the threat ... REASON: Resources to perform threat analysis and validation, previously assigned to the ACSI, were

<u>Item</u>	<u>Page</u>	<u>Para</u>	<u>Line</u>	<u>Change</u>
				assigned to INSCOM and organized as the Intelligence and Threat Analysis Center (ITAC) in 1977.
9	14	8p(s)	1	<p>CHANGE: Provides support and ... surveys using CODAP.</p> <p>TO READ: Provides CODAP support (to include analysis) through the Army Occupational Survey Program, with the understanding that suspense dates for these surveys will be mutually agreeable between MILPERCEN and ARTSG.</p> <p>REASON: Eliminates outdated term, MODG. Permits negotiation of realistic suspense dates for surveys.</p>
10	14	8q(2)	3	<p>CHANGE: ... research problems ...</p> <p>TO READ: ... study data requirements ...</p> <p>REASON: Clarity.</p>
11	17	11c(1)	3	<p>ADD: and COA.</p> <p>REASON: Same as Item 7.</p>

HEADQUARTERS
UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
OFFICE OF THE CHIEF OF STAFF
FORT MONROE, VIRGINIA 23651

ATCG-ATS

6 October 1977

Dear General McGiffert,

Your letter of 31 August 1977 forwarded to us General Kerwin's conceptual approval for the Army Training Study (ARTS), along with a draft letter of Instruction (LOI) for conduct of the study. You requested us to draft a detailed study directive for evaluation by the Army Staff prior to formal approval of the study by General Rogers. This we have done, and the draft study directive is herewith inclosed.

Brigadier General Rick Brown has been on board as the study director since mid-September. He has worked with a small preliminary study group here to prepare the draft directive. To insure that the development of this draft directive was accomplished in consonance with the concerns of the Army community, General Brown has over the past few weeks consulted informally with many of the key commanders, staff, and analysts whose support and understanding of the study will be essential for its success.

The draft study directive includes at Annex H the estimated OMA funding requirements for administrative support of the study group. The total estimated cost is \$274K, and is broken out to the EOE level. DA support of this administrative funding requirement is requested. You will note that no specific costs are displayed for the FY 78 analysis effort. This is because the effort will be based to the greatest extent possible on on-going or past work on training in MACOMs, with only minimal reprogramming required from within existing assets. TRADOC will adjust priorities as required, and coordinate requests for support from other MACOMs through DCSOPS.

We all realize that General Brown will not be able to generate data to permit us to solve all of these problems this year. Consequently, we propose that one of his tasks be to indicate, in the greatest detail possible, what the Army would have to do in subsequent years if it wishes to generate answers which are more readily data based. We propose that this "roadmap" be submitted to HQDA by late February 1978 in order to coincide with the next program cycle.

As you are well aware, the tasks which we have set for General Brown are exceptionally complex and his proposed staff is quite small. Nevertheless, we believe that the objectives we have set for this year are feasible. Therefore, we propose that General Brown and his study group be formed and begin the groundwork on the formal study effort while the Army staff reviews the draft study directive.

Sincerely,



ROBERT C. HIXON
Major General, GS
Chief of Staff

1 Incl
as

Lieutenant General John R. McGiffert
Director of the Army Staff
Washington, D. C.

SUBJECT: Training Developments Study Directive: Army Training Study (ARTS)
(INCLUDES DA STAFF CHANGES TO STUDY DIRECTIVE)

1. PURPOSE OF STUDY DIRECTIVE. This directive provides for the establishment of an ad hoc study group to examine the links among training resources, training programs, training readiness, and combat effectiveness.

2. STUDY TITLE. Army Training Study (ARTS). (CATEGORY 3, OPERATIONS AND FORCE STRUCTURE)

3. BACKGROUND. Training resources in the Army have been under pressure from various sources in recent years. The Army's effort to convince these agencies that arbitrary reductions should not be made must be supported with solid analytical effort as well as the professional assessments of senior soldiers. A study is needed to develop a logical and more analytical way to tie resources to combat effectiveness. Additionally, the Army must begin to formulate training programs for the complex weapons of the 1980's with the relationship of resources to combat effectiveness clearly in mind. *

4. STUDY PROPONENT. HQ DA, DCSOPS.

5. STUDY SPONSOR. HQ, TRADOC.

6. STUDY AGENCY. Army Training Study Group (ARTSG).

7. TERMS OF REFERENCE.

a. Problem. The Army's training task is to train the units and ^{TOTAL} soldiers of the Army to the required level of combat effectiveness as

* THE ARTS ADDRESSES THE FY 78 STUDY PLANNING GUIDANCE (SPG) PRIORITY PROBLEM AREA C: ARMY READINESS, AND HAS BEEN DESIGNATED A PRIORITY STUDY IN THE FY 79-80 SPG TO BE PUBLISHED BY HQDA.

efficiently as possible. Given dwindling resources, efficiency is imperative; given that the Army must be prepared to fight and win, combat effectiveness is equally imperative.

b. Purpose. The purpose of the study is two-fold:

First, to determine the relationship between training resources and combat effectiveness for the Army of the 1980's; and second, to determine the training programs required to optimize the capabilities of major new weapon systems programed for delivery to the force in the 1980's.

c. Objectives.

(1) Determine the functional relationships among resources for institutional and unit training, the individual and collective training programs of the Total Army training system, the resultant training readiness, and combat effectiveness.

(2) Determine the optimum mix of individual training programs conducted in the training base and in the force.

d. Scope. The focus of this study is the development of an efficient, justifiable, and achievable training system for the Army of the mid-1980's. Working from a broad "strategic" Army-wide perspective, the study will develop a conceptual training framework for achieving the optimum combat effectiveness when the major new weapons systems are fielded in the mid-1980's. In this regard, the study will begin by evaluating selected systems on a "breadboard"

model using selected hard data available in 1977-78. Using insights gained from the 1977-1978 near term effort and selected excursions, the study will then propose a "road map" of training policies and programs to transition from the present to the 1984-85 Army. Further insights concerning the current training system and the measurement of training readiness should result, enabling the senior commanders of the Army to make timely assessments and decisions about the present training system in terms of modifications to optimize the cost and the effectiveness of the training base.

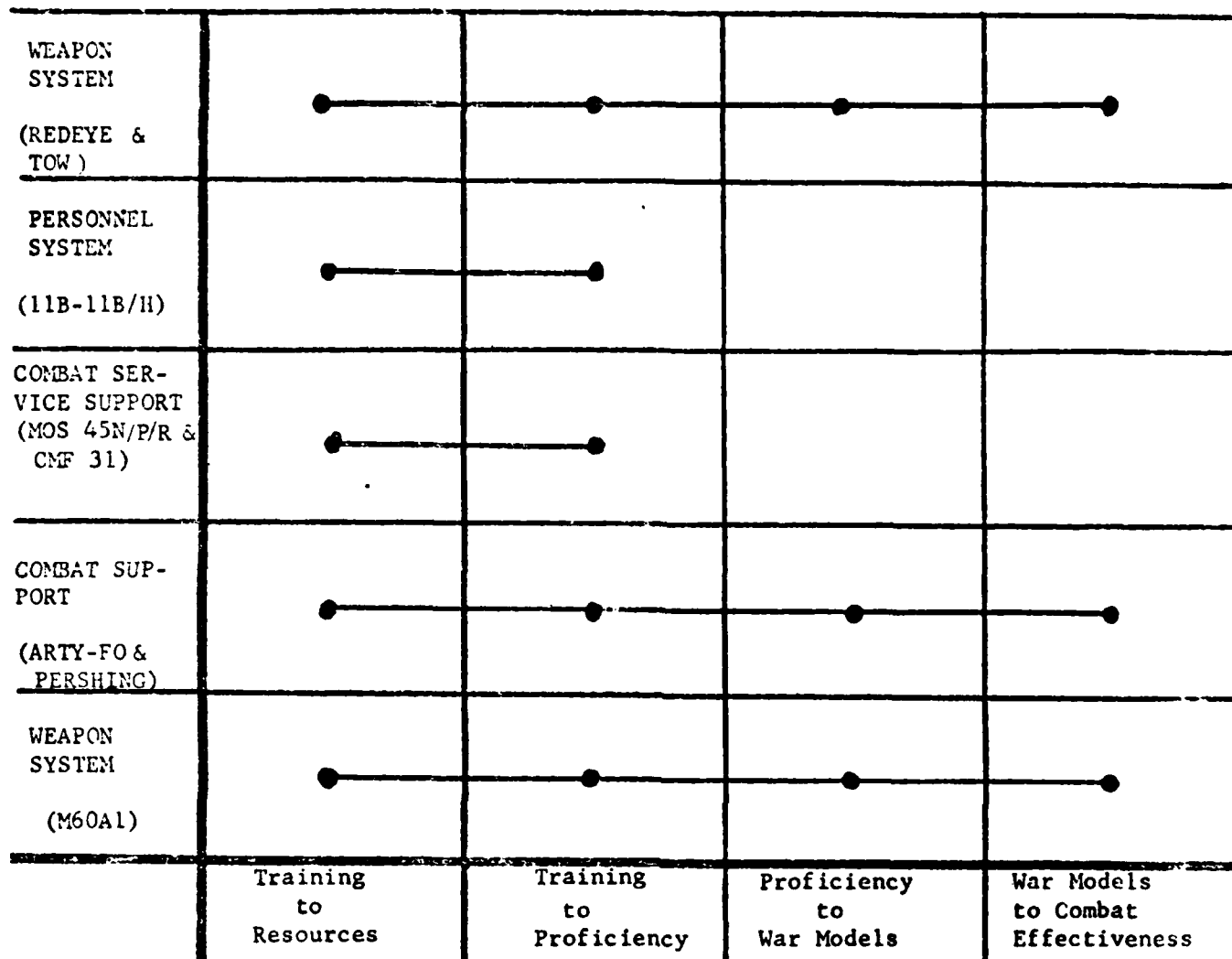
e. Limitations/Constraints.

1 (1) The study analytical process (para 7g) will be developed and tested for the near term, fully or partially, on selected aspects with five major current systems: weapon system - M60A1; combat support system - Artillery FO system and Pershing (force imbalance problem); combat service support - tank turret mechanics (MOS 45N/P/R) and/or communication maintenance (CMF31); personnel structure - 11B vs 11B/H; and systems with available data - REDEYE and TOW. Priority of the work effort is in Figure 1a.

(2) The effort concerning the mid 1980's will be focused on developing general policy alternatives to guide further study efforts. A Study Plan for the mid-1980's will be prepared by Feb 1978. Taskings and analyses will be prepared to provide direction to subsequent efforts.

(3) The manpower and resource constraints of the Five-Year Defense Plan (FYDP) will be incorporated for this study.

Figure 1a. Near Term Study Priority Matrix.



STUDY EEA COMPONENTS

PRIORITY OF EFFORT

First - Weapon System, M60A1, REDEYE & TOW

Second - Personnel System, 11B-11B/H

Third - Combat Service Support, MOS 45N/P/R & CMF 31

Fourth - Combat Support, ARTY-FO & Pershing

(4) Excursions (see Annex C) to be addressed in the near term are as follows: Individual Training on all five current systems indicated in (1) above as well as Personnel Programs, Unit Training Resources Support, Reserve Training, and Mature Battle for the MGOAl and REDEYE & TOW. See Figure 1b.

(5) The standard mid-intensity scenario for NATO-ACE/Heavy Division will be employed throughout the study. A standard Light Infantry contingency scenario^A will be employed as appropriate. IN ANOTHER ENVIRONMENT SUCH AS KOREA,

(6) A continued capability to support mobilization training requirements will be ensured.

(7) Analyse the following systems to be available in the 1984-1985 Army: XM-1, IFV, TACFIRE/COPPERHEAD/FASCAM, PATRIOT, Rearm/Refuel, Automatic Test Support System (ATSS), CMF 16, 19 and 63.

Figure 1b. Near Term Study Priority Matrix.

FIVE MAJOR SYSTEMS	WEAPON SYSTEM (REDEYE & TOW)	•	•	•	•	•	
	PERSONNEL SYSTEM (11B-11B/H)	•					
	COMBAT SERVICE SUPPORT (MOS 45N/P/R & CMF 31)	•					
	COMBAT SUPPORT (ARTY-FQ & Pershing)	•					
	WEAPON SYSTEM (M60A1)	•	•	•	•	•	
		Individual Training	Personnel Programs	Unit Tng Resources Support	Reserve Training	Mature Battle	Unit Replacement System

EXCURSION EEA

f. Assumptions.

(1) The Active Army is a 16-division force organized in accordance with the H-Series TOE.

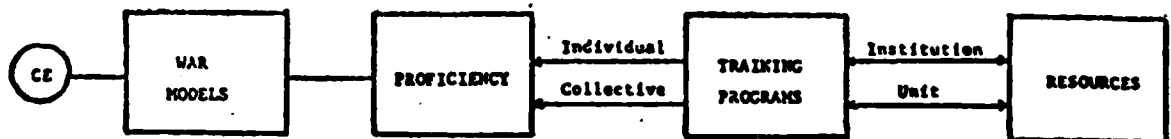
(2) The Army FYDP for material acquisition for the 1980's will be approved and implemented.

(3) Current estimates of the threat are valid and trends identified therein will continue into the 1985 time-frame.

(4) Interoperability with allies is provided with addressal of NATO AND ROM

(5) There will be no changes in the Reserve Component current training structure.

g. Analytical Process. The purpose of the study model is to provide an analytical framework for linking combat effectiveness, training proficiency, training programs, and resources.



The model may be entered at any point depending upon which aspect of the problem is to be addressed. For example, differing Army training programs produce various levels of individual and collective proficiency. These proficiency levels can be translated into combat effectiveness (CE) by using war models developed in the Combat Development/Training Development processes. Various mixtures of institutional and unit training programs are associated with required resources which can be expressed in terms of dollars, manpower spaces, and time. A detailed description of the Study Analytical Process is at Annex A.

h. Essential Elements of Analysis (EEA).

(1) Study EEA:

(a) Resources to Training. What is the relationship between institutional and unit training programs and their required resources?

(b) Training to Proficiency. What is the relationship between institutional and unit training programs and the resulting individual and collective proficiencies?

(c) Proficiency to War Models. What is the relationship between individual and collective proficiencies and parameters available in war models developed in the Combat Development/Training Development processes?

(d) War Models to Combat Effectiveness. What is the relationship between simulated outcomes of war models and combat effectiveness?

(e) Detailed Study EEA can be found as Annex B.

(2) Excursion EEA:

(a) Individual Training:

1 Assess the impact of changes in individual training techniques/technology (e.g., Improved Technical Documentation and Training (ITDT), CH-47 Simulator...) on combat effectiveness, proficiency and training resources?

2 What is the relationship to combat effectiveness, to mobilization capability, to training proficiency and to training resources of changes in the training mix between the training base and the units?

(b) Personnel Programs: What are or will be the impacts on combat effectiveness, proficiency, training programs and related resources of variations in:

1. personnel stability/turbulence
2. available manpower pool, enlistment criteria
3. mental category and other test battery discriminators
4. personnel shortages and/or grade mismatch
5. irregular male/female replacement flow.

(c) Unit Training Resources Support. What are or will be the impacts of specific training resource reductions in the unit on combat effectiveness, proficiency, training programs and resources?

(d) Reserve Training.

1. What level of combat effectiveness and proficiency can be achieved for RC units prior to deployment (D+30 and D+60)? What individual and collective training programs are required to reach that level? What are the required resources to attain and maintain proficiency?

2. Based on 1, what premobilization level of individual and collective proficiency must be maintained and what training programs can accomplish that objective?

(e) "Mature" First Battle. What impact on combat effectiveness, training programs and resources are implied by the D+5 battlefield situation; e.g., tank crews may be filled with infantrymen, clerks, or various other MOS.

(f) Unit Replacement System. What are, or would be, the impact on combat effectiveness, proficiency, training programs, and their related resources if unit replacement were adopted to alleviate turbulence? (Long term research)

(g) Detailed excursion EEA at Annex D.

8. RESPONSIBILITIES. Detailed explicit requirements can not be developed until the Study Group has been formed and can fully assess past and current test, evaluation and analytical efforts. Director, ARTS, will coordinate directly with MACOM Agency to obtain support, consistent with the approved level of effort represented at Annex G. Detailed requests for additional support (beyond level of effort at Annex G) will be made through the study proponent at Headquarters, Department of the Army.

a. DUSA(OR).

(1) Participates in the development of guidance for analytical studies and modeling.

(2) Serves as member of the Study Advisory Group (SAG).

(3) Provides a member to the Test/Evaluation/Analysis Consultant Group.

b. ASA MSRA:

(1) Serves as a member of the SAG.

(2) Participates in the development of guidance for manpower and reserve components.

c. TRADOC.

(1) Provides cost factors on various alternative institutional training programs and levels of training support provided to the field.

(2) Conducts tests on various alternative individual training programs to develop learning/decay/reacquisition curves and validate SQT/ARTEP as measures of proficiency.

(3) Conducts various analyses, surveys and staff studies (e.g., CTEA) to determine the relationship between institutional training and individual

proficiency, and to determine the optimum mix of individual training in the institution and unit in coordination with operating units.

(4) Provides three LNO with the study group (i.e., one each from ODCST, ODCSRM, ODCSCD) and members to serve on specified consultant groups.

(5) CG, TRADOC serves as chairman of the SAG.

d. FORSCOM.

(1) Participates in the development of cost factors for various levels of unit collective and individual training.

(2) Provides data on time spent by various units on collective and individual training.

(3) Participates in analyses which relate time spent in unit training to SQT and ARTEP results of various units.

(4) Provides unit/troop/equipment support to conduct training program and proficiency testing as coordinated with and approved by CG FORSCOM.

(5) Participates in studies to determine the impact of reduced unit training resources (i.e., ammo, POL, equipment) on training proficiency.

(6) Participates in studies to determine the impact of unit replacement on training proficiency.

(7) Provides General Officer membership on the SAG.

(8) Provides LNO with the study group and members to serve on specified consultant groups.

e. USAREUR.

(1) Participates in the development of cost factors for various levels of unit collective and individual training.

(2) Provides data on time spent by various units on collective and individual training.

(3) Participates in analyses which relate time spent in unit training to SQT and ARTEP results of various units.

(4) Participates in studies to determine the impact of reduced unit training resources (i.e., ammo, POL, equipment) on training proficiency.

(5) Participates in studies to determine the impact of unit replacement on training proficiency.

(6) Coordinates work on readiness to resources model with ARTSG.

(7) Provides General Officer membership on the SAG.

(8) Provides LNO with study group and members to serve on specified consultant groups.

f. 8th Army.

(1) Participates in the development of cost factors for various levels of unit collective and individual training.

(2) Provides data on time spent by various units on collective and individual training.

(3) Participates in analyses which relate time spent in unit training to SQT and ARTEP results of various units.

(4) Participates in studies to determine the impact of reduced unit training resources (i.e., ^{PERSONNEL}ammo, POL, equipment) on training proficiency.

(5) Participates in studies to determine the impact of unit replacement on training proficiency.

(6) Provides LNO with study group.

g. DARCOM.

(1) Participates in development of cost analyses for training devices.

(2) Participates in studies to determine the cost of institutional training outside of TRADOC.

(3) Provides performance data for selected systems and participates in analytical modeling support with regard to training parameters and combat simulations (AMSAA).

(4) Provides senior representative membership on the SAG.

(5) Provides LNO with study group and members to serve on specified consultant groups.

h. DA DCSOPS.

(1) Serves as study proponent.

(2) Serves as member of the SAG.

(3) Provides members to specified consultant groups.

(4) Coordinate requests for additional resource support required for ARTS projects for FY 78.

(5) Coordinate the programing of study resource requirements beyond FY 78.

i. DA DCSPER.

(1) Monitors study and provides guidance to study group on personnel matters.

(2) Serves as member of the SAG.

(3) Provides members to specified consultant groups.

j. DA DCSRDA.

(1) Monitors study and provides guidance to study group on materiel systems for the 1980's

(2) Provides members to specified consultant group.

k. DA DCSLOG. Provides forecasts of logistical constraints through the 1980's.

l. COA.

(1) Validates cost data.

- (2) Provides members to specified consultant groups.
- (3) **SERVES AS A MEMBER OF THE SAG.**
- m. DPA&E.

- (1) Serves as a member of the SAG.
- (2) Provides members to specified consultant groups.

n. OCAR and NGB.

- (1) Determines minimum support required for mobilization training and its associated cost.

- (2) Participates in the development of cost factors for various RC and IRR training programs.

- (3) Participates in the study of training proficiency of various RC.

- (4) Provides senior representative membership to the SAG.

- (5) Provides LNO and members to specified consultant group.

ARRANGES FOR VALIDATION OF THE THREAT.

- o. ACSI. ~~Validates threat~~ to be used in wargames and simulations in measuring combat effectiveness.

p. MILPERCEN.

- (1) Nominates members for ARTS Study Group.

- (2) Advises study group of personnel allocation matters.

- (3) Provides members to specified consultant groups.

- (4) Approves MACOM selection of NCO to participate in study consultant

group. *

- (5) ~~Provides support and participates in MODB surveys using CODAP.~~

q. OTEA.

- (1) Monitors all testing.

- (2) Provides listing of Operational Test scheduled for next 5 years

to study group and assists in efforts to incorporate selected training.

STUDY DATA REQUIREMENTS.
~~research problems~~ into these tests.

- (3) Provides members to specified consultant group.

*

PROVIDES CODAP SUPPORT (TO INCLUDE ANALYSIS) THROUGH THE ARMY OCCUPATIONAL SURVEY PROGRAM, WITH THE UNDERSTANDING THAT SUSPENSE DATES FOR THESE SURVEYS WILL BE MUTUALLY AGREEABLE BETWEEN MILPERCEN AND ARTSG.

r. USAREC. Participates in the study of the quality and quantity of accessions, and projections/trends for the 1980's.

s. CAA.

(1) Provides analytical support with regard to training parameters and combat simulations.

(2) Provides members to specified consultant groups.

t. USARI.

(1) Participates in development and conduct of various training tests.

(2) Assists in the development of various learning/decay/reacquisition curves.

(3) Provides members to specified consultant groups.

u. USAHSC.

(1) Provides information and evaluation of the training strategy, institutional and unit, of individual medical soldiers within field units.

(2) Provides information and evaluation of the collective training program for medical units within the field forces.

(3) Provides information and evaluation of the training support materials furnished to medical units to support the training program.

9. LITERATURE SEARCH.

a. Responsible/Interested Organizations. See Annex E.

b. Related Studies.

(1) DOD directed long range base structure study.

(2) DA directed division/brigade stationing study.

(3) TRADOC analysis of Enlisted Accession Options.

(4) Officers Training and Education Review.

(5) Division Restructuring Study.

10. REFERENCES. See Annex F.

11. ADMINISTRATION.

a. Support.

(1) The ARTS will require from Fort Belvoir office space for 17 full-time members (14 officers, 3 secretaries) and 10 liaison officers. Conference space for up to 50 participants will be required for 150 days during FY 78.

(2) Expenses: (\$000)

(a) Civ Salaries and Allowances	=	68.5
(b) Consultant fee	=	20.0
(c) Supplies (expendables)	=	5.0
(d) Equipment rental	=	8.0
(e) Military per diem	=	74.6
(f) Military travel	=	63.7
(g) Consultant Group(s) travel	=	<u>38.4</u>
		278.2

(h) Details are found as Annex H.

b. Milestone Schedule.

- (1) 7 Oct - Draft Study Directive to DA.
- (2) 12 Oct - Costing/RM Consultative Group Meeting.
- (3) 25-29 Oct - ARTSG Orientation Week with LNO.
- (4) 31 Oct - 1 Nov - Education/Training Consultative Group Meeting.
- (5) 31 Oct-2 Nov - TEA Consultative Group Meeting.
- (6) 7-8 Nov - Army 1985 Consultative Group meeting.
- (7) 14 Nov - RC Consultative Group Meeting.
- (8) 21 Nov - NCO Consultative Group Meeting.

(9) 19 Dec - ARTS SAG IPR. SAG will meet quarterly to provide guidance to the ARTSG.

(10) 15 Feb 1978 - ARTS Study Plan for long term effort.

(11) 1 Aug 1978 - ARTS Near Term Report.

(12) Consultant groups will hold meetings as required with an estimated frequency of once every 2 months. Subcommittees of selected consultant groups may be required to meet more frequently.

c. Control procedures.

(1) Members of the Study Advisory Group (SAG) should include: CG, TRADOC (Chairman); DA DCSOPS, DA DCSPER, ASA M&RA, DUSA(OR), DAS/DPA&E, NGB, CAR, USAREUR DCSOPS, FORSCOM DCSOPS, senior representative from DARCOMAND COI

(2) The Director, Army Training Study will be a member of each consultant group; other members should be senior representatives, as follows:

(a) Education/Training: DA DCSPER, DA DCSOPS, FORSCOM DCSOPS, TRADOC DCST, ATSC, TDI, ATB, ADMINCEN, LOGCEN, CACDA/CATRDA, USARI, OTERG.

(b) Test/Evaluation/Analysis: DUSA(OR), TRADOC DCSCD, TRADOC DCST, ATSC, OTEA, TCATA, TRASANA, AMSAA, TECOM, CDEC, USARI.

(c) Costing/Resource Management: DPA&E, COA, TRADOC DCSRM, TRADOC DCSCD, TRADOC DCST, FORSCOM COMPT, USAREUR DCSRM, TRASANA.

(d) Reserve Component Training: DA DCSOPS, FORSCOM DCSOPS, TRADOC DCST, NGB, OCAR.

(e) Army 1985: DA DCSRDA, DA DCSOPS - Requirements, TRADOC DCSCD, TRADOC DCST, SSI/AWC, PM and TSM for XM-1, IFV, Copperhead, PATRIOT, FASCAM (School Representative), TACFIRE, and the Automatic Test Support System (ATSS).

(f) Non-Commissioned Officers - CSM of the Army, CSM of the Sergeant Majors Academy, Division CSM each from USAREUR, CONUS Light Infantry Divisions, a CSS School, a Training Center; E-6 Drill Sergeant, E-6 from USAREUR (Combat Arms MOS), E-6 from CONUS (highly technical MOS) E-6 initial entry 1971 or later, E-6 from OCAR & NGB.

d. Study format or outline. TBD.

e. Action documents. N/A.

f. As the study progresses, close coordination will be maintained with the Director of Army automation (DAA) on matters relating to management information systems and all impacts on automation that recommendations of the study may create.

ORDER OF ANNEXES

- A. Analytical Process Description**
- B. Detailed Study EEA**
- C. Explanation of Excursions**
- D. Detailed Excursion EEA**
- E. Responsible / Interested Organizations**
- F. References**
- G. Detailed Requirements and Cost Estimates**
- H. Support Cost**
- I. Analytical Process Illustration**

The purpose of the study analytical process is to provide the framework for linking combat effectiveness, training proficiency, training programs, and resources. (See Annex I, Analytical Process Illustration.)

1. Training Proficiency. Training proficiency is the degree to which a unit is trained to perform the assigned mission. The components from which proficiency is derived are individual capabilities and collective skills. Initial work with the analytical process will use the Army Test and Evaluation Program (ARTEP) as a measurement of collective training proficiency and Skill Qualification Test (SQT)/Soldiers Manual (SM) as a measurement of individual training proficiency. The suitability of using SQT's and ARTEP's as a measurement of training proficiency which can subsequently be used to determine combat effectiveness is of primary interest. If it is determined that SQT and/or ARTEPS cannot be used, suitable criteria will be developed for this purpose. Analysis to confirm the accuracy of these measurement techniques will be part of the essential analysis used in developing the analytical process. Training readiness (TNG_R) will be defined as the sustained level of proficiency which can be maintained. However, neither training readiness nor training proficiency are directly translatable into combat effectiveness so simulations and war games must be used.
2. Combat Effectiveness. Combat effectiveness is dependent upon the readiness level of training, personnel and logistics, but also intangibles of tactical readiness and personal/leadership readiness. The personnel readiness (PER_R) and logistical readiness (LOG_R) are the conditions which describe the potential to conduct and sustain combat in manpower and logistical support. They are prescribed presently in AR 220-1. Tactical readiness (TAC_R) is the measurement of the ability of the leader and staff to successfully integrate the combat systems under representative battlefield conditions as measured by variable weapons exchange outcomes derived from

war simulation games; e.g., CAMMS, 1ST BATTLE OR BATTLE. Personal/Leadership readiness (P/L_R) is the leaders' subjective assessment of the leadership climate of his subordinates. The battlefield significance of each, and the implied interactions, have probable significance to particular training programs. Specific training programs will be examined for combat effectiveness sensitivity to fluctuations in these variables. Further, the study analytical process attempts to translate the proficiencies derived from training programs into combat effectiveness. Combat effectiveness is primarily dependent on systems' designed capabilities (W_p) as influenced by a function of varying levels of readiness of training (TNG_R), personnel (PER_R), logistics (LOG_R), and intangibles of tactical (TAC_R) and personal/leadership (P/L_R): $CE = W_p \cdot f(TNG_R, PER_R, LOG_R, TAC_R, P/L_R)$. Ideally, these war models in producing predictions of combat effectiveness simulate the interactions of many weapon systems, combat systems, and support systems. Insights are expected into the combat worth of weapons systems for allocation of resources. Similar insights should be developed concerning the relative effectiveness of major combat systems (maneuver, fire support, intelligence, etc.).

3. Models of War. The study analytical process uses war gaming simulations extensively. These simulations are of two basic types with some overlaps. These are the relatively detailed computer simulations developed and used by the Combat Development process and the games principally used as training vehicles developed within the Training Development process. These models are built with a multitude of parameters used to describe the effects of weapon systems on the battlefield against a designed threat. For this reason, values for each model input can be selected/varied, and the resultant impacts on the

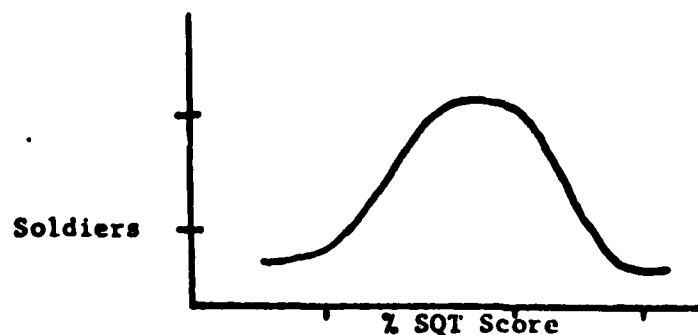
battlefield can be assessed. The war models also can be used to address the comparative influence of different categories of weapons systems on the battle. The product from these models of war will be red kills, blue kills, force exchange ratios, Forward Edge of the Battle Area (FEBA) movement, etc., which are regarded by the Combat Development community as credible measures of combat effectiveness. Study analysis will address the problem that ARTEP and SQT/SM results (measures of proficiency) contain very few of the data elements required as input for simulations and war games.

4. Bridge - Training Proficiency to Models of War. The link between proficiency and simulations/war games is the association of ARTEP and SQT/SM results to a list of model parameters selected as sensitive to training. This list must match parameters associated with individual proficiency, collective proficiency, joint proficiency, and identify those parameters which cannot be associated with training proficiency (e.g., Armor thickness).

individual training	P1, P2, P3, P4, P10
collective training	P1, P5, P6, P10
joint proficiency	P1, P10
training independent	P7, P8, P9

Most of the variable parameters in computer simulation models are not related to SQT results. However, since the SQT samples from many SM tasks, it can be taken to be an estimate of individual proficiency of the force. Consequently, SQT performance can be used as a basis for adjusting parameters in the war simulation models. By looking at the performance of soldiers on those tasks most closely associated with specific parameters (i.e., first

aid tasks are not particularly related with tank gunner skills and/or probabilities of hit), a spread of SQT scores will be revealed.



Using computer programs, that distribution of scores can be inserted into the war simulations. By setting the parameter values in that way the simulation will then play a force with representative individual proficiencies. Similar procedures can be used in estimating collective proficiencies by judicious selection and evaluation at predictive ARTEP events.

5. Training Programs. The study analytical process will describe training programs as allocations of time. The model assumes unit commanders allocate their total unit training time (T_t) between collective training (T_a), training for ARTEP tasks, and training for individual tasks in SM/SQT (T_s). $T_t = T_a + T_s$. Essential analysis will investigate the mutual benefit of T_a time for SM/SQT proficiency and vice versa. Individual training time within the Training Base (T_i) comprises the other major block of training programs. Although it is recognized that some collective training is conducted in the institution, this model assumes it to be negligible compared to the collective training

accomplished in units. While collective tasks are practiced in the training base, predominately this is focused on the skills required of the individual as a member of the collective team.

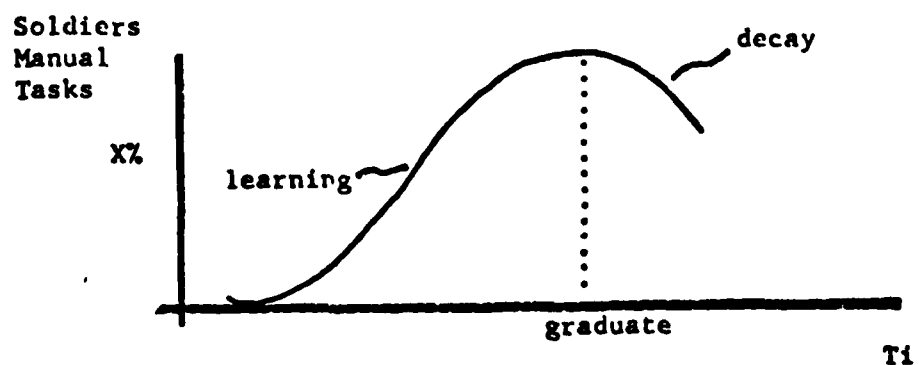
Training program alternatives are developed by varying Ta, Ts and Ti.

The study model contains the flexibility to: hold Tt constant and trade-off Ta and Ts; vary Tt letting Ta and Ts seek their required levels; trade-off Ts and Ti; etc.

The model recognizes that a great deal of individual training takes place at the lowest echelons which does not require a formal time allocation within the unit. Therefore, $TS = Ts1 + Ts2$, where Ts1 is formally allocated time in the unit for individual training and Ts2 is the informal training time spent in the unit (e.g., a squad leader teaching first aid or weapon disassembly, or use of TEC lessons). Ts2 could be considerably more productive in units, particularly with increased in training support materials. Therefore, given more support materials the model can reflect reductions in demand on the total training time available to a unit and the resultant pressure to assume more individual training tasks responsibility in the training base.

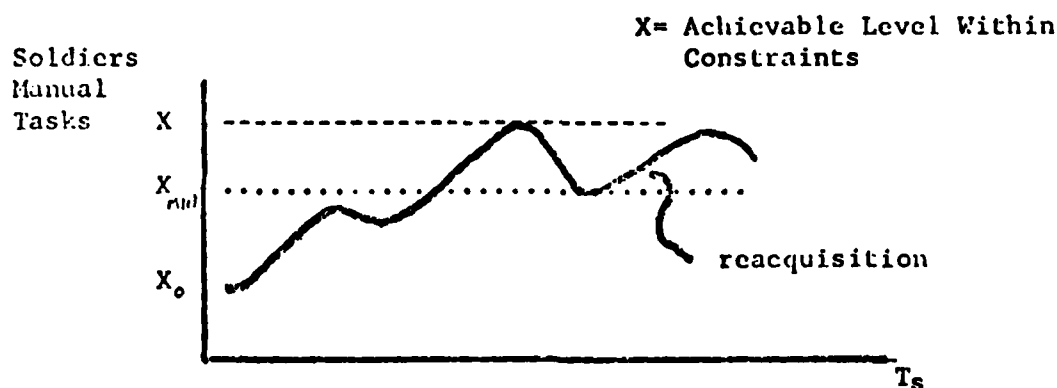
The model also defines T_A as $T_{A1} + T_{A2}$. T_{A1} is that collective training time which is traditional in nature and generally a major consumer of resources and Battalion Field Training Days. T_{A2} is less traditional in nature, consumes much less resources and is characterized by the use of the latest collective training technology. Examples are leader wargames (CAMMS, BATTLE, etc.), TEWTS, CPX, scaled miniature ranges, conduct of fire trainers, etc. Many units must place a great deal of reliance on T_{A2} to maintain required collective proficiency. The constrained armor units in Berlin and Wiesbaden is a perfect example. The model can reflect this situation and consider its importance in light of available resources.

6. Bridge - Training Proficiency to Training Programs. The link between training proficiency and training programs will be a series of learning, decay, and reacquisition curves as a function of time (T_i , T_s , T_a).



A typical curve from the institution would indicate that for given periods of time in the institution (T_i) increased individual proficiency is gained. Time in the institution is dependent upon the number of tasks trained there and the time to train each. Upon graduation and with no additional training, proficiency would decrease at some rate.

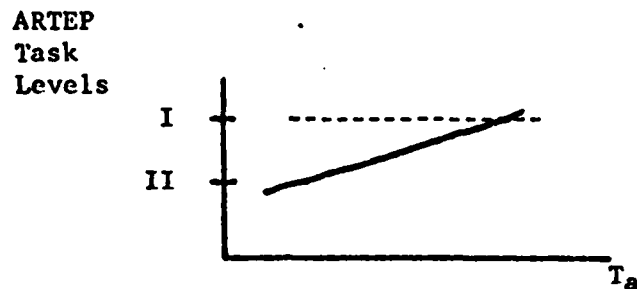
When the individual leaves the institution and enters the unit, the learning/decay curve becomes a function of time spent on individual training in the unit (T_s). In order to maintain proficiency units must train on a regular basis to make certain that the oscillation of decay and reacquisition of proficiency never falls below the minimum required.



The SM system establishes this minimum level which is required by the individual (X_{min}). This X_{min} will vary by type unit and may be verified. However, constraints due to the personnel management system and which exist in the institution are such that the individual entering the unit may be at a level (X_0) below X_{min} . Thus, there may be a period of time the individual in the unit is below the standard required.

Therefore, individual training in the unit has two tasks: first, to bring new personnel up to standard proficiency as quickly as possible, and secondly to maintain that proficiency.

Of equal if not greater priority in unit training, however, must be the attainment of collective training proficiency as measured by ARTEP.



Although the Army sets ARTEP levels to be achieved, Level I or II, the study analytical process would attempt to examine the area on a continuum in terms of ARTEP tasks passed. This percentage of tasks passed would be considered to be a function of T_a , where T_a is measured in terms of Battalion Field Training Days (BFTD). Unit training requirements could then be discussed in terms of BFTD needed to reach proficiency.

7. Resources. These include administrative facilities, supplies, and equipment, training facilities, ammo rates, transportation, travel, and personnel salaries and allowances. All of these resources can be translated to a dollar value. Both one-time and recurring costs will be considered. Military and civilian manpower spaces will be identified and tracked separately from dollars because of the critical nature, general shortage, and visibility of manpower spaces, especially in the training base.

The distinction between mission and base operation costs will be maintained,

and this distinction will require refinements in the formulae described below. Dollars are easily manipulated, as they are a unit of measurement with a single finite value. Manpower measurement will require more sophistication because of the qualitative variation in manpower spaces by type (mil or civ), grade, MOS, and other qualifications.

8. Bridge - Training Programs to Resources. The training programs are described by time (i.e., T_a , T_s , T_i). Units allocate T_t between T_s and T_a , and institutions spend T_i . All three of these can be converted to a dollar base. This conversion requires the development of workload measurement factors to distinguish the training workload and efficiency being accomplished in the unit or in the institution. (For institutional training, these factors already exist.) Next, formulae must be developed to relate the respective workload factors to dollar and manpower cost. Because of precise P8 accounting, the workload-dollar formula in the training base is already established. P2 accounting is less precise and will require analysis in order to develop workload formulae for units. These workload factors and formulae will then provide the basis for varying the parameters T_a , T_s , T_i , which are directly related to the workload factors, and determine the resultant effect on resources, or vice-versa.

9. Description of Analytical Process Interactions. Below are listed steps which illustrate how the developed analytical process could be used to analyze the Army Training Problem:

Step 1. Trade-off the total unit training time available (T_t) between collective (T_a) and individual training (T_s). Assume the first priority is to ARTEP tasks; units will spend time required to produce the highest level of collective proficiency attainable.

- Step 2. Consequently, set the model parameters related to collective proficiency at maximum.
- Step 3. The balance of unit training time would be spent on individual training. This dictates the amplitude and frequency for individual decay/reacquisition in the unit, given a minimal acceptable individual proficiency level. That in turn dictates the required level of proficiency for institutionally trained graduates. The total program (T_i , T_a , T_s) should achieve proficiency to the level of AMSAA/DT/MN parameter values.
- Step 4. Thus, set model parameters related to individual proficiency at a maximum.
- Step 5. Maximum collective and maximum individual proficiency will yield optimal Combat Effectiveness.
- Step 6. Measure $\$$ associated with the training program just described by T_i , T_a and T_s .
- Step 7. Next take one case of high individual proficiency and lesser collective; do steps 1-6.
- Step 8. Next take one case of high collective proficiency and lesser individual; do steps 1-6.
- Step 9. Repeat for alternative training proficiencies. The result will be a series of training programs each yielding a combat effectiveness outcome and each associated with a resource level.

Step 10. Determine 3 alternatives:

<u>CE</u>		<u>Training Program</u>	<u>Resources</u>
Red/Blue		T_A, T_S, T_I	\$
?	=	A	Unit Instit
?	=	B	Unit Instit
?	=	C	Unit Instit

Step 11. Conduct excursions on these three alternatives based on the CE equation ($CE = W_p \cdot f(TNG_R, LOG_R, PER_R, TAC_R, P/L_R)$) or on critical topics and policy conditions. That will allow conclusions concerning the relative sensitivity in terms of CE and resources for each of three training alternatives to the fluctuation of other variables.

ANNEX B. DETAIL STUDY EEA

RESOURCES TO TRAINING

1. What P2 funds are attributable to unit training? (Representative units to be selected)

a. What P2 training attributable funds are spent on individual training (Soldier's Manual (SM) tasks)? What are the manpower and dollar costs by appropriation (OMA, MPA, PA) by program element (mission and base operations), by element of expense category (personnel, supplies, equipment, travel, contractual services, other)?

b. What P2 training attributable funds are spent on collective training (Army Training and Evaluation Program (ARTEP) tasks)? What are the manpower and dollar costs by appropriation (OMA, MPA, PA), by program element (mission and base operations), by element of expense category (personnel, supplies, equipment, travel, contractual services, other) and by specific cost elements (POL, ammunition, repair parts, maintenance, etc)?

c. What do the "shadow schools" cost the units in manpower and dollars?

d. What is the cost of special and contingency operations schools?

2. What is the cost of individual training in the institutions? What are the manpower and dollar costs by appropriation (OMA, MPA, PAO), by program element (mission and base operations), and by element of expense category (personnel, supplies, equipment, travel, contractual services, other). Training associated with the baseline (current) systems. Manpower should be identified by military (Off/WO/Enl) and civilian. Costs should be identified by appropriation and should include mission and base operation costs.

3. What are the cost/usage factors for training support methods such as Training Extension Courses (TEC), SM, Training Circulars, Correspondence Courses, Improved Technical Documentation and Training (ITDT), REALTRAIN, etc? What are the cost/usage factors for training devices such as the CH-47 Flight Simulator, Missile Theater, M-70 TOW Trainer, etc?
4. What is the cost of institutional training other than TRADOC and active duty units (e.g., DARCOM, Army Health Services Command)?
5. What is the cost of Night/NBC training and incremental cost associated with extended reverse cycle training?
6. What resources are required to assure continued capability to support the mobilization training requirement?
7. What are the relative costs of self-pacing compared to current programs?
8. How does contractor cost for institutional training compare with current training costs?

TRAINING TO PROFICIENCY

1. How were current SM and ARTEP tasks developed?
2. How well does proficiency on SM tasks measure an individual's ability to fight his weapon system, or perform his specific duty?
3. How well does proficiency on ARTEP tasks measure the collective abilities to fight weapon systems or perform the unit's assigned mission.
4. What is the relationship between SM tasks passed and time spent in the institution?
5. What is the relationship between SM tasks passed and the absence of time spent on individual training (i.e., decay curves)?
6. What is the relationship between SM tasks passed and time formally allocated for individual training in units?
 - Bringing entry level personnel up to SM standards
 - Maintaining SM standards
7. What is the relationship between SM tasks passed and the degree/intensity of employment of various training support materials?
8. What instruction can be eliminated/reduced from BT/AIT/OSUT without degrading priority individual training proficiency? How much time is required to develop loyalty, esprit, unit morale and discipline?
9. What is the impact on the proficiency relationship to time if 10%, 25%, or 40% of institutional training is transferred to units?
10. What is the relationship between ARTEP tasks passed and time spent on collective training in units?

11. What is the relationship between ARTEP tasks passed and time since the last ARTEP?
12. What increases in training proficiency can be achieved through ARTEP without troops using various combat simulation techniques -- CATTs, CAMMS, BATTLE?
13. What is the increase/decrease in individual proficiency attributable to collective (ARTEP tasks) training in units?
14. What is the increase/decrease in collective proficiency attributable to individual (SM tasks) training in units?
15. What are the impacts on training proficiency of working under difficult conditions -- night/NBC/lack of sleep/stress?
16. What training programs are required to ensure 30%, 50%, 70% of enlisted personnel validate higher grade in SQT?
17. What is the impact on proficiency of interoperability training?
18. For what skills can the Army consider contract training?
19. How does the current unit training readiness report (AR 220-1) correlate with actual training proficiency?
20. What is the relationship between SQT scores and personnel MOS status as stated in the current unit readiness report?
21. What changes should be made in the unit training readiness report?
How could SQT and ARTEP results be modified so that they can be employed in a readiness reporting system?
22. What peacetime training policies hinder the development of training proficiency, such as safety requirements on live fire?

23. What training proficiency is achieved through use of shadow schools?
24. How much training time does a trainer need to sustain proficiency of his soldiers in all Soldiers Manual tasks? What is the impact on learning curves? Of the competence of the trainer?
25. What training records (if any) should be maintained in institutions and/or units. What if any should be forwarded to Army level?
26. What training proficiencies (both individual and collective) are achieved through contingency training?

PROFICIENCY TO WAR MODELS

1. How is training proficiency incorporated into the traditional M.F.S. (Mobility, Firepower, Survivability) formula used in war games?
2. How can we improve our capability to measure parameter proficiency? (Ex: Rates of fire can be measured. Ability to read/use terrain can not be measured precisely.)
3. Do existing models adequately provide for variations in individual training levels?
4. Do existing models include provision of collective training factors?
5. What is the performance required of personnel and equipment to win on the mid-intensity battlefield during the mid 1980's?
6. What SM tasks can be translated directly to parameters in current simulations?
7. What ARTEP tasks can be translated directly to parameters in current simulations?
8. What SM tasks can be translated indirectly to parameters in current simulations?
9. What ARTEP tasks can be translated indirectly to parameters in current simulations?
10. Can tests be designed to be administered with SQT that would yield values for parameters used in current simulations?
11. Can tests be designed to be administered with ARTEP that would yield values for parameters used in current simulations?

12. Can new models be designed which directly use training parameters?
13. How are training and human factor parameters incorporated into AMSAA data?
14. What is the relationship between SM task passed and system capability as described by MN/DT/AMSAA curves?
15. What is the relationship between ARTEP tasks passed and system capability as described by MN/DT/AMSAA curves?
16. To what degree can the ability of the unit commander and staff to integrate combat systems on the battlefield be incorporated into war models?
17. How are motivation/morale related to training proficiency? (Which comes first -- does proficiency lead to motivation and morale?)

WAR MODELS TO CE

1. What influence would a short warning scenario have on the Total Army training system?
2. Is motivation/morale as important as skill level in combat effectiveness?
3. What is the comparative influence of different categories of weapon systems on the battlefield? Combat systems?
4. What is the proper echelon to measure combat effectiveness (crew, platoon, company)?
5. What is the appropriate measure of combat effectiveness for AC, for RC?
6. What is the impact on combat effectiveness of the ability of the leader and staff to successfully integrate weapon systems on the battlefield? To integrate combat systems?
7. Can levels of personnel training, levels of night training, levels of efficiency of crew operations or logistics be varied in multiple runs of games to derive different battle payoffs?
8. What are the relative contributions of tactical readiness (TAC R) and training proficiency to combat effectiveness? How do these factors relate to or affect weapon design capabilities?
9. What is the impact on combat effectiveness of degree of interoperability with allied nations? Can this be incorporated into war models?

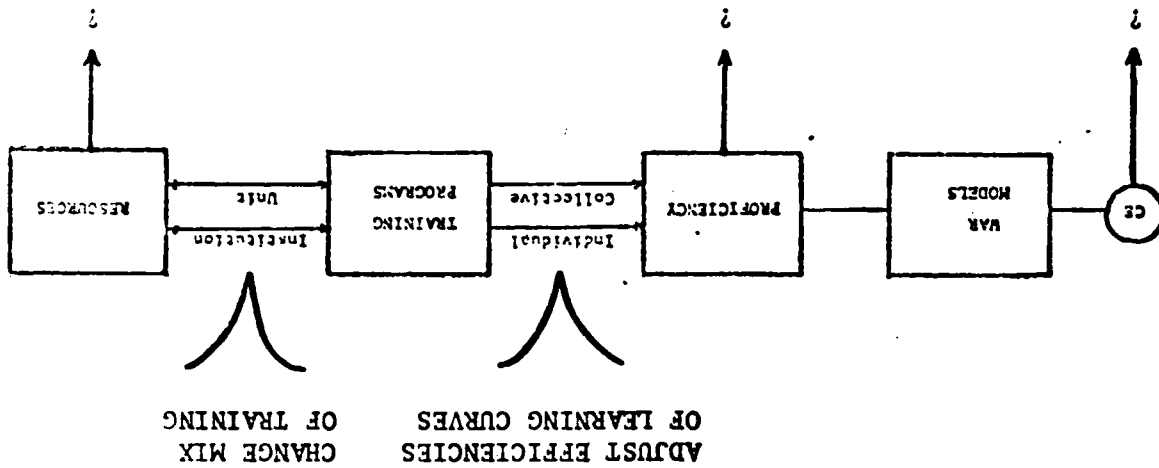
ANNEX C.

EXCURSIONS

Listed below are excursions planned for the Army Training Study. All of these excursions are to be addressed in the long term effort. Which of these excursions can be treated in the near term depends upon their priorities and the required effort to do each relative to that which will be available over the next year. Initial prioritization is as follows:

- (1) Individual Training.
- (2) Personnel Programs.
- (3) Unit Training Support Conditions.
- (4) Reserve Training.
- (5) "Mature" First Battle.
- (6) Unit Replacement System.

While the excursions are listed separately they are not mutually exclusive. Changes in one could affect any one or several of the others.

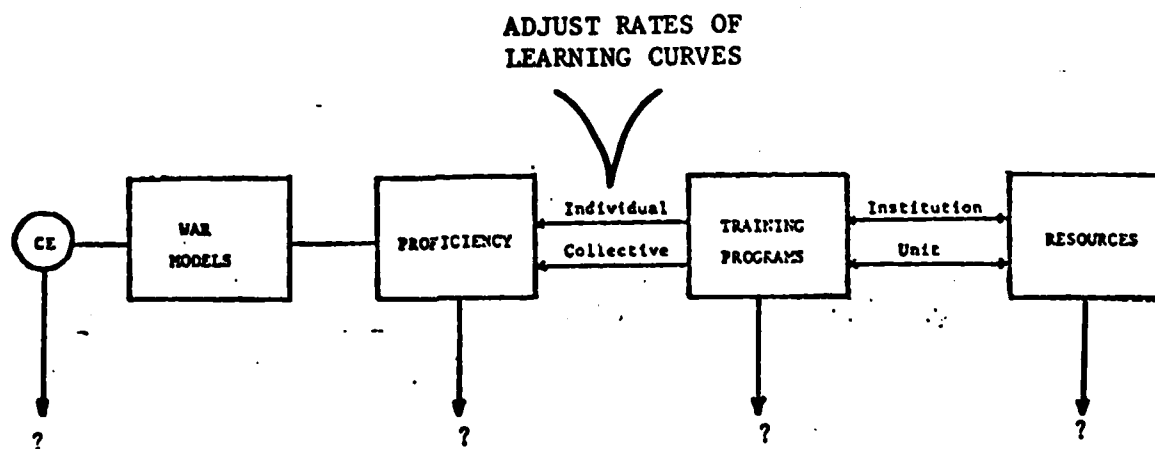


- a. Increased individual training in units -- AIT for some MOS, reduced basic, etc.
- b. All initial entry training in units, i.e., in-process in the training base only.
- c. Assign parts of training base to field units, e.g., Ft Jackson AIC would be 4th Bde of 5th Div. (Note: May impact on resources only).

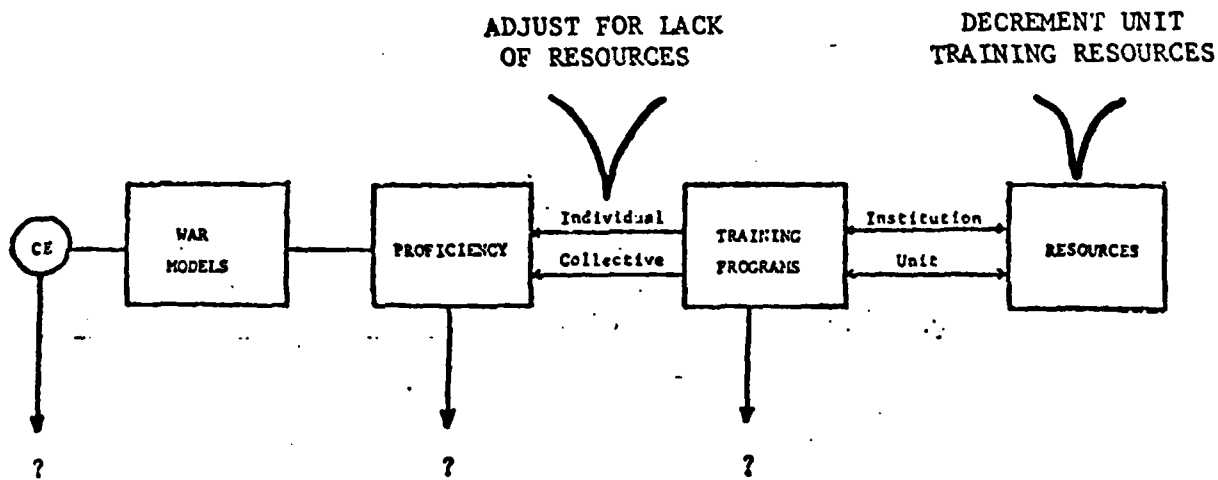
following alternatives:

The training mix between the training base and the units will include the needs and resource requirements will result from alternative training programs. analytical process, various levels of training proficiency, combat effectiveness of the learning curves and evaluating those courses by means of the of training conducted in the institution and in the unit. By adjusting the as the adoption of ITDT, a FCIS, or CH-47 simulator) and changes in the mix is to determine the impact of changes in training techniques/technology (such 1. Individual Training. The objective of the individual training execution

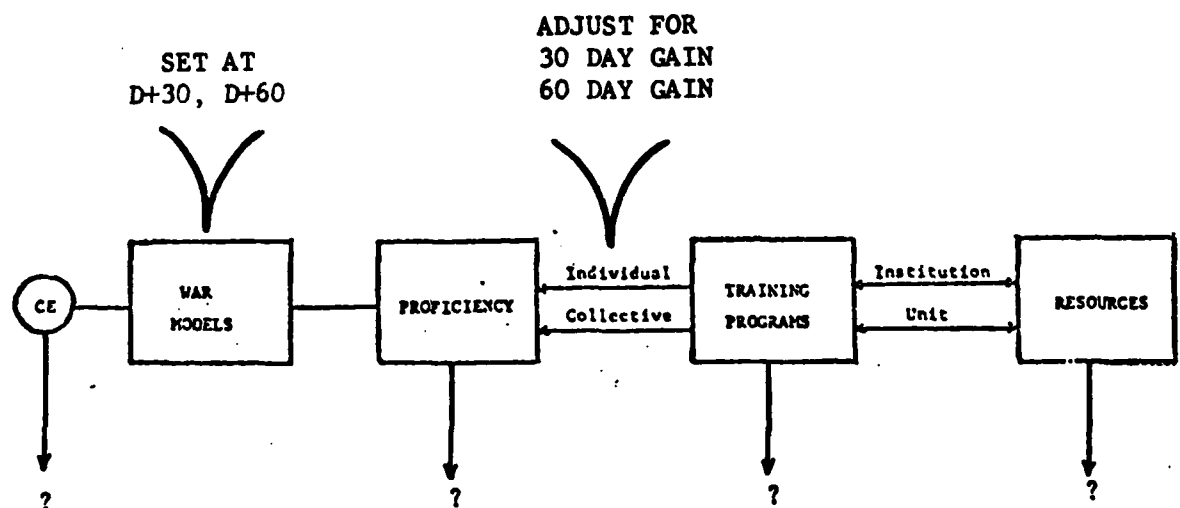
2. Personnel Programs. The objective of the personnel excursion is to determine the impact on training proficiency and resources of variations in personnel instability and quality of people trained by the Army, e.g., trends toward lower mental category accessions. Again, it is through adjusting the learning/decay/reacquisition curves that various combat effectiveness and training proficiency outcomes will be matched to training programs and resources. For example, the personnel instability problem forces units to repetitively retrain the same material both individually and collectively, the result being a more gradual reacquisition curve. Of course, the basic ability to learn has a similar impact on the learning curve.



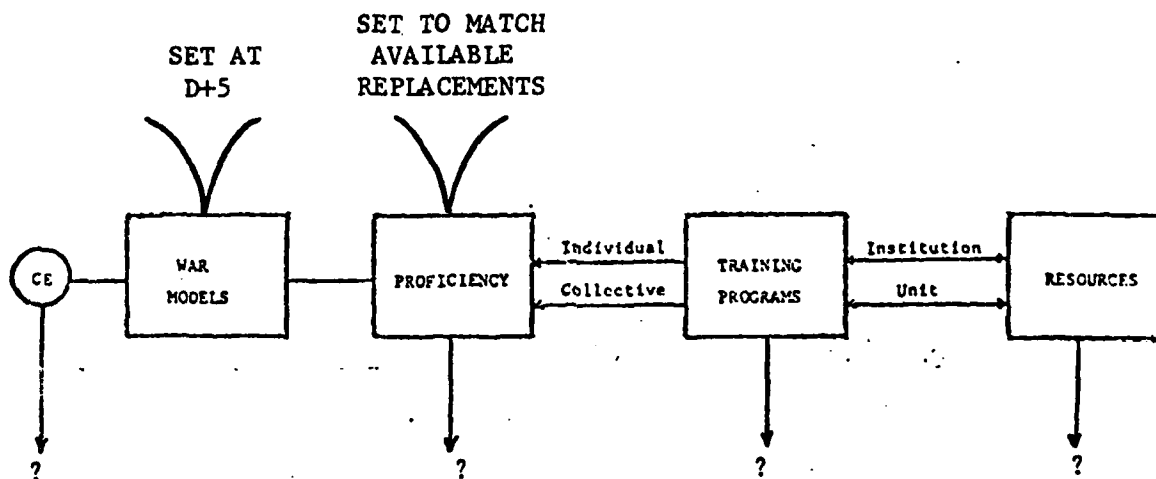
3. Unit Training Resource Support. The objective of the unit training resource support excursion is to consider the impact of reduced training resources on unit training proficiency and combat effectiveness. By assuming levels of available resources (e.g., decrements of 30% equipment, 30% ammunition or 50% POL) structure a division training program in CONUS and adjust the proficiency reacquisition capability. This analysis will produce various levels of training proficiency which result in different levels of combat effectiveness in terms of losses and other measures. This excursion will explore impacts of national resource conservation policies. Additionally, it will be applied to USAREUR circumstances to portray the battle outcome costs of reduced levels of resources.



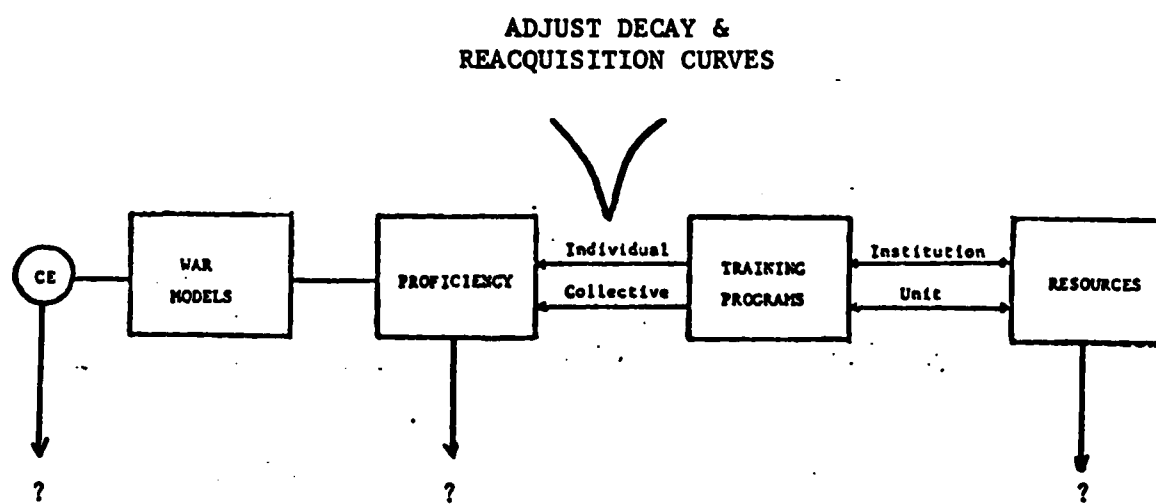
4. Reserve Training. The objective of reviewing Reserve Component training policies is to investigate their impact on the D+30 and D+60 battlefield. Determination of the levels of proficiency achievable prior to deployment on D+30 will be the first step. Alternative training strategies would be analyzed to improve the premobilization training proficiency as well as examine the feasibility of alternative initial training programs and intensive refresher/upgrade programs which could enhance RC accessions.



5. "Mature" First Battle. The objective of the "mature" battle excursion is to assess the training profile of units after battlefield attrition (3AD, SCORES 2a, D+%). Casualties taken up to that point will have been replaced with various MOS, i.e., tank crews may be filled with infantrymen or clerks. Hence, combat effectiveness on the battlefield may be low. This excursion will evaluate alternative training strategies which would minimize the degradation of combat effectiveness and training proficiency during the "mature" First Battle and determine the impact of these strategies on resource requirements.



6. Unit Replacement System. The objective of the unit replacement excursion is to consider the impact of eliminating turbulence by deploying complete units on a periodic basis (possibly 2 year cycle) - units trained by "train and retain" policies. The prospect is that without the personnel turnover problem, proficiency (particularly collective) will decay less rapidly and that reacquisition will be more efficient and rapid. By adjusting those curves tradeoffs of combat effectiveness and resources will result.



ANNEX D. DETAIL EXCURSION EEA

INDIVIDUAL TRAINING

1. What changes in training techniques/technology (e.g., ITDT, FCIS, CH-47 simulator) impact combat effectiveness, training proficiency and training resources?
 - a. How will increased simulator training for expensive, complicated systems affect the acquisition of training proficiency?
 - b. What will be the projected learning curves with the use of new training technologies and techniques?
 - c. Can combinations of ITDT and simulation be used with complex systems to improve training proficiency and thus combat effectiveness? What are the resource implications?
2. What changes in the training mix between the training base and the units impact on combat effectiveness, mobilization capability, training proficiency and training resources?
 - a. What is the impact on resources and combat effectiveness associated with changes in the mix of training programs and changes in training techniques/technology?
 - b. What is the minimum length of BCT to gain basic skills and condition enlistees to the Army?
 - c. What is the relationship between individual and unit training for specialist skills?
 - d. What minimum skills must the soldier have when he arrives in the unit?

e. Can crew training in the institution increase individual proficiency in the unit? What is the hierarchy of learning from individual to collective by skill level?

f. What is the amount of actual time available to units to conduct training?

g. What is the amount of training time required to optimize individual training proficiency in units?

h. What are the resources (manpower, dollars, and time) associated with alternative institutional training programs?

i. What are the resources associated with alternative individual training programs in units?

j. Is there a systematic method to allocate tasks for training between the unit and the institution? If not, can one be developed? If yes, is it being used properly?

k. What is the impact on proficiency and resources of various on-the-job training (OJT) programs?

3. Can methods such as exportation of part of the training base (e.g., an OSUT company) to units to provide individual/crew refresher training increase proficiency and productivity?

PERSONNEL PROGRAMS

What are or will be the impacts on combat effectiveness, proficiency, training programs (e.g., standardization) and related resources of:

a. Personnel stability/turbulence.

(1) How does personnel stability/turbulency influence training programs?

(2) Determine the feasibility of maintaining unit leadership stability in units over an extended period of time (2-3 years).

(3) What is the affect of peacetime attrition in training, both in the unit and in the institution?

b. The available manpower pool, enlistment criteria, and recruiting.

(1) What changes are expected in enlistment criteria? How will this impact on individual training requirements in the training base?

(2) Are enlistees' sense of values more critical to training proficiency than intellectual aptitude?

(3) What is the availability of Army eligibles? Manpower pool?

(4) What should eligibility criterion be - age, mental, physical, and educational?

(5) Should the amount of time required to learn a particular MOS skill be tied to the length of service contract?

c. Mental category and other test battery discriminators.

(1) What is the correlation between motivation and mental category?

(2) What is the knowledge decay factor for each mental category?

(3) What time differential will be required to train low mental category personnel to desired level of proficiency?

(4) What additional resources will be needed to train low mental category personnel to desired level of proficiency?

(5) Determine the feasibility of the assignment of individuals to MOS by mental category.

(6) Determine the impact of individual motivation on acquiring/retaining training proficiency?

d. Personnel shortages and/or grade mismatch. What are the battle-field and training program implications of NCO/leadership shortages and grade mismatch?

e. Male/female replacements flow.

UNIT TRAINING SUPPORT IN RESOURCES

1. Determine the relationship between training proficiency and each of the following: equipment available/equipment required, ammo available/ammo required, POL available/POL required, training time available/training time required, instructor-student ratio.
2. What unit training programs have to be eliminated/reduced as a result of 30% decrements in various resources (ammo, POL, equipment)? What is the effect of training equipment storage procedures similar to those employed by GSFG?
3. If units (both heavy and light divisions) are decremented 30% equipment, what is the impact on training proficiency, combat effectiveness, unit training programs, and related resources? What is the impact on morale, motivation in the unit?
4. What is the impact on unit collective and individual proficiencies of national conservation programs? (e.g., 50% reduction in POL)
5. What is the impact on individual proficiency resulting from limited access to training devices.
6. What is the impact on individual/collective proficiency of limited local training areas (e.g., laser devices) and constrained major training areas (e.g., range days per year)?

RESERVE TRAINING

1. What level of proficiency can be achieved for RC units prior to deployment? What individual and collective training programs are required? What are the resources?

a. How do all the other excursions influence Reserve combat effectiveness, training programs, and associated resources?

b. Can the training system respond to mobilization requirements without revision?

c. What is the relationship between training, proficiency and personnel retention in the RC?

d. What is the relationship of individual to collective training in the RC in sustaining proficiency?

e. What is the cost of training a RC unit to ARTEP standards?

f. How would variations from the current 38 days of annual/reserve training impact on the combat effectiveness?

g. How much training time is required annually to sustain an RC unit at ARTEP standards?

h. What is the cost of training IRR to SM standards?

i. How much training time is required annually to sustain IRR to SM standards?

j. What are the required resources of alternative training strategies to improve the pre-mobilization training of Reserve Component personnel (Officer/NCO/E1-E4)?

k. What is the level of training readiness of an average roundout battalion, D+30, D+60 unit?

1. What ARTEP level should be required for those units which would not be committed until after D+60? What training programs and associated resources would be required?

m. How much increase in proficiency can be achieved in 30 days? At what echelon should reserves be employed: as individuals, crews/squad, ----? What training programs and associated resources are required to maintain the appropriate pre-mobilization proficiencies?

2. Can simulations be played to a D+30 and D+60 scenario and can war games be set at a D+30/D+60 scenario?

3. Historically, how were the most combat effective NG and RC units trained?

"MATURE FIRST BATTLE"

1. Can simulations be run to a D+5 scenario and can war games be set at a D+5 scenario: (Heavy Division in Europe; Light Division in contingency area)?
2. At D+5 what proficiencies will replacements possess under current training programs and what impact will they have on combat effectiveness?
3. Can we afford not to cross-train? What are actual costs within a company and/or battalion to cross-train? Has such a program been evaluated?
 - a. Which members of a unit should be cross-trained in essential combat MOS of that unit?
 - b. How much cross-training in individual skills should be conducted in which MOS and at what echelon?
4. What alternative training strategies would rapidly upgrade proficiency of war-time replacements?

UNIT REPLACEMENT SYSTEM

What are, or would be the impact on combat effectiveness, proficiency, training programs, and their related resources if unit replacement was adopted to alleviate turbulence?

- a. What are the manpower and dollar cost (or savings) of deploying and rotating complete units on a periodic basis?
- b. What resource savings in PCS and unit training could be achieved through stabilization of assignments?
- c. How can combat effectiveness be measured in a unit replacement system?
- d. How will attrition in a deployed unit be replaced?
- e. At what unit level should replacements be made by unit?
- f. Determine the feasibility of institutional training and subsequent assignment of crews or squad size elements.
- g. What is the impact on institutional training of various unit replacement concepts?

ANNEX E. RESPONSIBLE/INTERESTED ORGANIZATIONS

DUSA (OR)

ASA (MRA)

TRADOC

FORSCOM

USAREUR

8TH ARMY

DARCOM

DAS

DA DCSOPS

DA DCSPER

DA DCSRDA

DA DCSLOG

COA

OCAR & NGB

DPA&E

ACSI

DAA

MILPERCEN

OTEA

USAREC

CAA

USARI

USAHS

ANNEX F. REFERENCES

1. Administrative and Procedural.

- a. AR 5-5.
- b. AR 15-14.
- c. AR 37-18.
- d. AR 70-10.
- e. AR 71-9.
- f. AR 381-11.
- g. AR 700-127.
- h. AR 1000-1.
- i. DA Pam 11-25.
- j. FM 100-5.
- k. TRADOC Reg 11-8 (DRAFT).
- l. TRADOC Pam 71-8.
- m. TRADOC Pam 71-10 (DRAFT).
- n. TRADOC Pam 71-3.

2. Substantive.

- a. TRADOC ltr from GEN Starry to GEN Rogers (CSA), dtd 25 Jul 77.
- b. CSA ltr from GEN Rogers to GEN Starry (CG, TRADOC), dtd 11 Aug 77.
- c. OCSA ltr from GEN Kerwin (VCSA) to GEN Starry (CG, TRADOC), dtd 31 Aug 77.
- d. OCSA ltr from LTG McGiffert (DAS) to MG Hixon (C/S, TRADOC), dtd 31 Aug 77.

Annex G: Detailed Requirements

Key:

General: This annex lists various information required to address specific EEA within the short term timeframe (1 year).

Columns:

1. EEA # - Lists the specific number of the EEA as explained in Annex B and D.
2. Cell Content - This lists the selected systems (M60A1, REDEYE, TOW, 31B, 41N, Artillery FO, 11B/H) which will be used in addressing the various EEA. The term "Selected Systems" means that all the possible systems will be considered for that particular EEA.
3. One year feasibility - This column indicates whether it is feasible to address that specific EEA within the one year (short term) timeframe.
4. Type of Effort Required - The type of study effort required; test, staff study, research, etc.
5. Proponent - The organization chiefly responsible for addressing that EEA.
6. Comments - Primarily this column lists various informational sources for answering the EEA. Soldiers required for testing purposes are also listed.

FY 78ORGANIZATION

<u>Mil</u>		<u>Civ</u>	
<u>Perm</u>	<u>LNO</u>	<u>Perm</u>	<u>Temp</u>
07 @ 1	USAREUR @ 1	GS 12 @ 1	GS 6 @ 1
06 @ 2	FORSCOM @ 1		GS 5 @ 1
05/04 @ 8	DARCOM @ 1		GS 4 @ 1
04/03 @ 1	TRADOC @ 2		3
	EUSA @ 1		
03/02 @ 1	DAMO @ 1		
	NGB @ 1		
	DAAR @ $\frac{1}{9}$		

Consultant

1 for 100 days

EXPENSES (\$000)^{1/}1. Civ Sal and Allowances (FY 77 rate).

a. GS 12, Step 5:	25.0
b. GS 6, Step 5:	15.0
c. GS 5, Step 5:	13.0
d. GS 4, Step 5:	11.0
e. Overtime for secretaries, 500 hrs @ \$9:	$\frac{4.5}{68.5}$

2. Consultant fee (incl travel).

100 days @ \$200.00:	20.0
----------------------	------

3. Supplies (expendables): 5.0

4. Equipment rental (xerox, telephone answering service - dictation): 8.0

^{1/}OMA; probably all in sub-program 81

5. Military Per Diem.

a. Permanent members (12 mbrs average 200 days TDY)	
(1) 100 days @ \$35.00 = \$3500.00 X 12:	42.0
(2) 100 days @ \$20.00 = \$2000.00 X 12:	24.0
b. LNO (USAREUR, FORSCOM, TRADOC -- average 100 days)	
100 days @ \$20.00 = \$2000.00 x 4:	8.0
c. LNO (EUSA -- average 30 days)	
30 days @ \$20.00 = \$600.00:	<u>.6</u>
	74.6

6. Military Travel (incl ground trans)

a. Permanent members (12 mbrs travel 200 days, average one trip every five days with average distance of 750 mi. (12 X 200/5 X 750 = 360,000 air miles @ 15½¢ per mile:	55.8
b. LNO TRADOC use mil air.	
c. LNO FORSCOM (travel 100 days, average one trip every seven days with average distance of 450 mi (100/7 X 450 X 15.5¢):	1.0
d. LNO USAREUR (travel 100 days, average one trip every 10 days with average distance of 2500 mi (100/10 X 2500 X 15.5¢):	3.9
e. LNO EUSA (two trips as required):	<u>3.0</u>
	63.7

7. Consultant Group Travel and Per Diem.

There are six consultant groups for the study, each of which will meet at Belvoir five times in FY 78. (RON one night.) Each group has about eight members, one-third of whom could be civilians. About one-half of the consultant group membership is from the Washington DC area. This leaves about 23 members for whom travel and per diem expenses will be incurred for five trips to Belvoir (18 mil and 10 civ)

a. Military per diem	
(18 X 5 X \$20.00):	1.8
b. Civilian per diem	
(10 X 5 X \$50.00):	2.5
c. Military travel (six members from TRADOC use mil air. Remainder travel average round-trip distance of 2000 mi)	
(12 X 5 X 2000 X 15.5¢):	18.6
d. Civilian travel	
(10 X 5 X 200 X 15.5¢):	<u>15.5</u>
	38.4
Total ARTSG Cost (\$000)	278.2

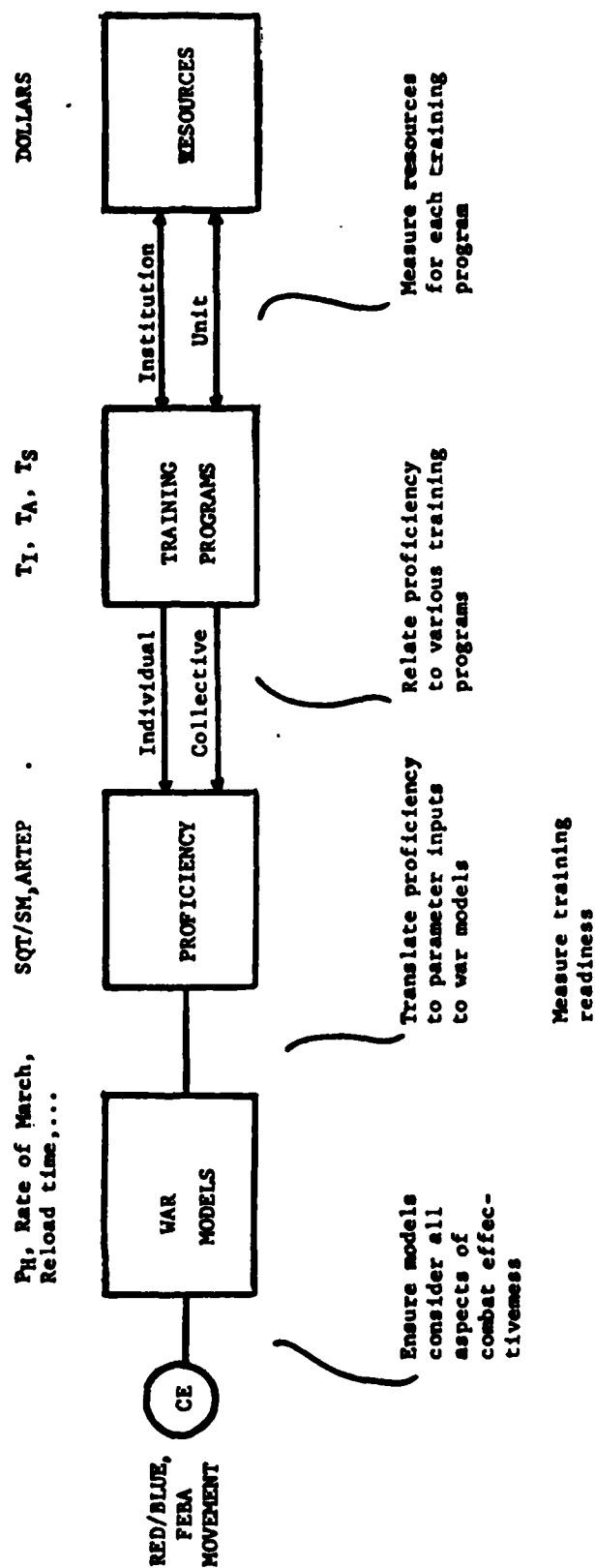
Assumptions:

(1) Base ops costs (office space/furniture/equipment, utilities, etc) provided by Fort Belvoir.

(2) Telephone bill will be less than \$100 per month and will be absorbed by Fort Belvoir.

(3) Government quarters provided to all LNO and military consultant group members for TDY at Fort Belvoir.

ANNEX I. ANALYTICAL PROCESS ILLUSTRATION



NOTE: T_I - Training Time in Institution
T_A - Training Time in Unit on ARTEP
T_S - Training Time in Unit on SM/SQT

TRAINING TO RESOURCES

EEA #	CELL CONTENT	ONE YEAR FEASIBILITY	TYPE OF EFFORT REQUIRED	\$, MY	PROPOSERS	COMMENTS
1 & 4	Selected Systems	Yes	Data Collection & Analysis		FORSCOM	CAMUS/P2M USAREUR Studies HQDA Comptroller
2	Selected Systems	Yes	Data Collection & Analysis		TRADOC/ DCSRM	TRADOC MOS Course Cost Handbook
3	Selected Systems	Yes	Survey		TRADOC/ TDI	TEC study by ATSC
5	Selected Systems	Yes	Data Collection & Analysis		TRADOC	
6	Selected Systems	Yes	Staff Study		TRADOC	Established Mobilization Min for Tng Base-
7	45N, 31B and FO only	Yes	Data Collection & Analysis		TRADOC	TDI Study 2-9
	Other Selected Systems	No				
8	45N and 31B	Yes	Staff Study		TRADOC	Survey contractors

TRAINING TO PROFICIENCY

EEA #	CELL CONTENT	ONE YEAR FEASIBILITY	TYPE OF EFFORT REQUIRED	\$, MY	PROponents	COMMENTS
1	Selected Systems	Yes	Historical Search		TRADOC	FORSCOM Troops: 200 men for 2 wk 150 men for 3 wk 50 men for 3 wk 200 tow for 3 wk 200 Redeye for 3 wk *Note: Will tax analytical capability of TRADOC
2 & 3	Selected Systems	Yes	Test		TRADOC (TCATA)	
4	M60A1, 31B, 45N Only Other Selected Systems	Yes No	Test		TRADOC	TRADOC AIT Troop Cost
5	M60A1, 31B, 45N Other Selected Systems	Yes No	Test		TRADOC (TCATA)	
6	Selected Systems	Yes	Data Collection & Analysis		TRADOC	ARI Test at Ft Hood on going
7	Selected Systems	Yes	Data Collection & Analysis		TRADOC	
8	System Independent	Yes	Audit/Staff Study		TRADOC	Review of BT POI's Testing infeasible
9-14, 16	Selected System	Yes	Data Search & Analysis		ARTS	Participation of 3AD & 4IN

ZEA #	CELL CONTENT	ONE YEAR FEASIBILITY	TYPE OF EFFORT REQUIRED	\$, MY	PROPOSERS	COMMENTS
15	Selected Systems	Yes	Data Collection & Analysis		ARTS	
17	Selected Systems	No			ARTS	
18	31B & 45N	Yes	Staff Study		TRADOC	
19-20	Selected Systems	Yes	Data Search & Analysis		ARTS	
21	System Independent	Yes	--		ARTS	GRC Study: Quantification of Training Readiness
22	Selected Systems	Yes	MACOM Survey/Study		MACOMS	
23	Selected Systems	Yes	Staff Study		MACOMS	Dollars included with cost study
24-26	Selected Systems	No	--		--	

90

PROFICIENCY TO WAR MODELS

EEA #	CELL CONTENT	ONE YEAR FEASIBILITY	TYPE OF EFFORT REQUIRED	\$, MY	PROONENT	COMMENTS
ALL	Selected Systems	Yes	Staff Studies & Analysis		TRADOC (TRASANA CAC) and CAA	
1-5	Selected Systems	No	WAR MODELS TO COMBAT EFFECTIVENESS			
6	Selected Systems	Yes	War Games & Analysis		TRADOC (CAC)	CAMMS, Battle-C&GSC participation
7	Selected Systems	Yes	Model Analysis & Development		TRADOC (TRASANA)	
8	Selected Systems	No				
ALL	EXCURSION M60A1 FO 45N & 31B 11B/H TOW AND REDEYE TOTAL COST	Yes	INDIVIDUAL TRAINING Detailed Staff Studies & Analysis		TRADOC (USAAHMS) (WSAFAS) (USAAHMS) & (USALA) (USAAADS) (USAIS)	Women in the Army Study, T-S2 TFMG OTERG

5-5

RESERVE TRAINING

EEA #	EXCURSION	ONE YEAR FEASIBILITY	TYPE OF EFFORT REQUIRED	\$, MY	PROPOSER	COMMENTS
1	Selected System	Yes	Data Search Consolidation		ARTS, OCAR	Mr R. Webster Asst to the Secy of Defense for Reserve Affairs
2	Selected System	Yes	Model Manipulation		TRADOC (CAC)	
ALL	M60A1 TOW AND REDEYE	Yes	PERSONNEL PROGRAMS Staff Studies		ARTS, MILPERCEN USAREC and DCSPER-DA	T2S ² A2S ² TDMG OTERG
ALL	M60A1 TOW AND REDEYE	Yes Yes	UNIT TRAINING SUPPORT Data Search & Analysis Data Search & Analysis		FORSCOM, TRADOC FORSCOM, TRADOC	
ALL	Selected Systems	Yes	"MATURE" 1ST BATTLE Staff Study Scenario Design, Model Manipulation		ARTS, TRADOC (CAC, TRANSANA ADMINCEN & CAA)	
ALL	Selected Systems	Yes	UNIT REPLACEMENT SYSTEM Data Search & Consolidation		ARTS, MILPERCEN	Sources: BDE 75-76 USAFAS-Pershing Male

CHAPTER II

STUDY ADVISORY GROUP MEETINGS

1. Chapter II contains the results of ARTS Advisory Group meetings, chaired by Commander, TRADOC, and conducted according to the following schedule:

<u>SAG</u>	<u>DATE</u>	<u>PAGE</u>
I	19 Dec 77	II-2
II	14 Feb 78	II-10
III	18 Apr 78	II-12
IV	31 May 78	II-23
V	8 Aug 78	II-27

2. In accordance with the guidance of SAG I (page II-8, item 9), the ARTS TEA '85 effort was transferred to HQS TRADOC in January, 1978.

3. As discussed on page II-21, guidance received at SAG III essentially confirmed the focus of the study group direction on an increased analysis of data derived from Training Effectiveness Analysis (TEA) '78, and the development of a Battalion Training Model (BTM) (hierarchy of training tasks related to associated resource and readiness levels).

4. SAG IV was devoted primarily to an update of the Battalion Training Model. The last SAG on 8 August 1978, SAG V, consisted of specific observations, conclusions, and recommendations based on data drawn from the TEA '78, BTM, and the ARTS attitudinal survey. Additionally, insights were drawn from senior officer seminars, concept papers, and other appropriate material. BTM and TEA follow-on activities were approved by the SAG.



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

3 January 1978

MEMORANDUM FOR: GENERAL STARRY

SUBJECT: Results of 19 December Study Advisory Group, Army Training Study

1. The attached MFR, forwarded for your approval, summarizes the 19 Dec 77 SAG decisions concerning ARTS recommendations made in the following major areas:

Critical Issues
Monograph Outlines
TEA '78 Programs
TEA '85 Outline
Excursion/Occasional Paper Topics
Response to DA Comments
Areas Not to be Addressed
Topics for Next SAG

2. The MFR includes your 20 Dec 77 resume of study guidance as well as other SAG decisions which I feel are appropriate to the overall study effort.


3. I am working on transfer of the TEA '85 effort to DCST/DCSCD and will be prepared to brief you on that as well as our planning for DPS 40 follow-up on 26 Jan.

Respectfully,

FREDERIC J. BROWN
BG, USA
Director

1 Incl
as

CF:
DCST
DCSCD
DCSRM

Approved  _____
Need more information on _____
See me on _____



ATCG-ATS

DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

3 January 1978

MEMORANDUM FOR RECORD

SUBJECT: Results of 19 Dec 77 Study Advisory Group Meeting for Army Training Study

The following elements of the Army Training Study effort were approved by the first meeting of the Study Advisory Group:

a. Critical Issues. Critical issues (SAG notebook pp 3-4) were approved as modified by Incl 1, para a.

b. Monograph Outlines.

(1) Monograph outlines (SAG notebook pp 28-57) were reviewed in general and approved for the following six papers:

- (a) Individual Training (BT, OSUT, Unit, NCOES)
- (b) Reserve Training (Pre/Post Mobilization)
- (c) Training Proficiency (TNGR, Learning Curves)
- (d) Combat Effectiveness (TACR, P/LR)
- (e) Training Programs (TA, TS, E)
- (f) Cost of Training Resources (Indiv/Collective)

(2) In regard to the monograph on individual training, it was noted that consideration should be given to total MOS proficiency rather than only to system related skills. See Incl 1, para c.

c. TEA '78 Programs.

(1) Test, evaluation, and analysis programs for FY78 (SAG notebook pp 57A-81), to include field and analytical support, were noted and approved.

(2) It was also noted that addressal of HAWK/IHAWK training problems due to force imbalance was in question and that ARTS would attempt to resolve the matter with USAADS.

(3) Support by ARI was discussed as summarized in Incl 1, para e.

ATCG-ATS

3 January 1978

SUBJECT: Results of 19 Dec 77 Study Advisory Group Meeting for Army Training Study

d. TEA '85 Outline. The TEA '85 outline (SAG notebook pp 82-88 w/Incl) was approved subject to the comments in Incl 1, para a(7), (8) and (9).

e. Occasional/Excursion Paper Topics. Occasional and excursion paper topics (SAG notebook pp 89-98) were approved subject to the following comments:

(1) Consideration of contract training should be discontinued per Incl 1, para f.

(2) Turbulence and its effect on training should be emphasized in the study effort as noted in Incl 1, para d.

f. Response to DA Staff Comments. The general approach of the study was considered consistent with DA staff comments (SAG notebook pp 103-107) to the draft study directive. Major discussion elements in response to DA staff comments included, but were not limited to, the following:

(1) Study emphasis will continue to develop the relationship between resources and proficiency.

(2) Interim budget justification data for PPBS will be provided by ARTS/TRADOC as required. This will be supported by preparation of a "roadmap" outlining in general terms what policy/programs should be pursued to achieve an effective and efficient total Army training program for the mid-1980's.

(3) The Comptroller of the Army has SAG representation. SAG meetings are scheduled approximately every two months for the first six months.

(4) The disadvantages of event driven training such as ATP/ATT are recognized. However, it may be appropriate to develop "game books" which emphasize selected skills critical to the maintenance of training proficiency.

(5) In determining the optimum mix of individual training in the training base and force, impacts will be assessed for increased training responsibilities in either institution or unit.

(6) In the development of peacetime training programs, emphasis will be given to ensure that such programs function in a post D day environment.

ATCG-ATS

3 January 1978

SUBJECT: Results of 19 Dec 77 Study Advisory Group Meeting for Army Training Study

(7) The long term study effort will focus on the Army of the mid-1980's to include the challenges of high/low equipment mix.

g. Areas not to be addressed. Approval was given for not addressing the following study areas (SAG notebook p 108):

- (1) Medical/legal/chaplain training.
- (2) Flight training.
- (3) Special mission training (UW, Ranger, Abn).
- (4) Officer acquisition/professional development.
- (5) Mandatory admin training (EO, safety, SAEDA, etc.).
- (6) Civilian training (civilians, civilian institutions).
- (7) Organizational Effectiveness Training (treated tangentially).
- (8) Environmental training (Arctic, Jungle).
- (9) Nuclear/CBR.


h. Topics for Next SAG. Topics for the next SAG (scheduled for 14 Feb 78) were approved as follows:

- (1) Review Research Monographs.
- (2) Army 85 Progress.
- (3) Army Training Study Outline.
- (4) Excursion/Occasional Paper Outlines.

FOR THE DIRECTOR:

1 Incl

1. Recap of ARTS SAG,
19 Dec 77


DAVID A. HUFNAGEL
COL, ADA
Deputy Director

HEADQUARTERS
UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
OFFICE OF THE COMMANDING GENERAL
FORT MONROE, VIRGINIA 23651

ATCG

20 December 1977

MEMORANDUM FOR: MG SEIGLE
 ✓BG BROWN

SUBJECT: Recap of ARTS SAG 19 Dec

Following is a resume of what I said at the conclusion of the ARTS SAG on 19 December, and constitutes guidance for the continuing study effort.

a. Reference "critical issues" pages S3 and S4 of the SAG notebook:

(1) Issue: "To determine the resources and training programs required to achieve training proficiency within the current Army total Army individual and collective training system."

Guidance: For the purposes of this effort, "training proficiency" should be defined as the highest we know can be achieved with any system. It will be the "well trained unit" curves of Gorman's studies on TOW, the tank, DRAGON and others. For units--ARTEP criterion referenced goals still apply. For small units in battle runs, hitting all the targets in the required time, with first rounds and no overkill, or some system as close to criterion referencing as we can get must be used for the evaluation.

Priority: 1

(2) Issue: "To develop suitable measures of training proficiency and appropriate standards of training readiness applicable to a readiness reporting system."

Guidance: The standards of training readiness we should seek to define are a combination of the highest performance effectiveness curves that can be achieved by all systems held by the unit. How to integrate systems curves into a single measure or a few measures is a problem to which the study group must address itself. We should not however try to relate to the AR 220-1 system, or one like it, for that system does not measure training proficiency or readiness in a realistic, meaningful way.

Priority: 3

ATCG

20 December 1977

SUBJECT: Recap of ARTS SAC 19 Dec

(3) Issue: "To develop a methodology which establishes the relationship between training programs and proficiency and combat effectiveness for the current total army."

Guidance: OK; so long as no more than the current 80/20 percent ratio is maintained between resources expended on defining the training program to training proficiency relationship, and the training proficiency to combat effectiveness relationship. The latter relationship is hard to define, its measures will be subjective at best, and we should concentrate the bulk of our resources on relationships for which we can collect and analyze good data.

Priority: 6

(4) Issue: "To determine the optimum mix of individual training program conducted in the training base and in the operating force."

Guidance: This effort should attempt to describe requirements for the balance between the two, recognizing that the ideal balance may not in fact be the balance we are able to sustain given current resources and conflicts in guidance from our many masters.

Priority: 4

(5) Issue: "To develop a common costing program for training which accurately addresses and interrelates both institutional and unit training costs, (dollars, people and time)."

Guidance: Press on.

Priority: 2

(6) Issue: "To develop the training programs required to facilitate the rapid, efficient, effective transition of the current total army from peacetime through sustained wartime overseas combat operations in conjunction with allied forces." (Europe; Northeast Asia)

Guidance: Modify methodology proposed for analysis of this issue to focus on readiness for combat of: (1) deployed forces; (2) reinforcing forces; (3) mobilized forces up to the limit of the 24 DFE. You will therefore consider the training proficiency for the 0-30 day force package, the 31-60 day force package, and the 60 day to the limit of the 24 DFE force package, instead of the "first," "fifth" and "fifteenth" battles proposed. Use the current TPFDL.

Priority: 5

ATCG

20 December 1977

SUBJECT: Recap of ARTS SAG 19 Dec

(7) Issue: "To develop a policy/program "roadmap" to an effective, efficient, and justifiable training system for the 1985 total Army."

Guidance: Block out such a road map in general terms; agree as between Generals Brown and Seigle when that effort should be turned over to DCST and DCSCD for the TRADOC staff to pursue.

Priority: 7

(8) Issue: "To develop a rationale which articulates persuasively the resource requirements of the total Army '85 training system to the resource analyst, to the strategic planner, and to the concerned layman."

Guidance: Turn this over to the TRADOC staff. DCST and DCSCD begin immediately an analysis to describe the parameters of the 1985 period battlefield with XM-1, IFV, AAH, and other systems coming on line, by or at that time. Cannot describe training requirements with what is now known about systems and operational concepts for their employment. The task is to set forth the operational concept, then describe the battle in sufficient detail for training requirements to be derived.

Priority: For ARTS--stop; for DCST and DCSCD--1

(9) Issue: "To develop a training development program to ensure the timely and effective assimilation of the complex weapons systems anticipated to be in the total Army in 1985."

Guidance: Turn this over to the TRADOC staff. Guidance as with Issue at (9) above.

Priority: For the TRADOC staff--2 following after Issue at (8) above

b. Near term resource problems: TRADOC's current dilemma with the budget, especially the 1979 budget, must be dealt with off line from the ARTS. DCSRM, DCST, DCSCD and others will do this. ARTS need be involved only to the extent that ARTS analyses must refer back to the way things are now, or are about to be, as a frame of reference. For example, should we decide to turn all REP training over to the Guard and Reserves, then ARTS analyses must take that into account in whatever comparisons may be drawn.

c. Systems orientation versus MOS orientation for training program analyses: In consideration of training programs and their resources, the

ATCG

20 December 1977

SUBJECT: Recap of ARTS SAG 19 Dec

study must include consideration of resources--required to impart basic non-system related skills of soldiering which are part of both basic and advanced individual training. These skills not only require resources in the training base, but in units as well, and their repetitive practice to achieve/retain proficiency is an important part of training management in both unit and institutional training.

d. Turbulence and its effect on training. No training system can be effective if we do not solve the turbulence problem--from the faction of the population that's improperly assigned by MILPERCEN at the outset, to the numbers ripped off by commanders down to the battalion where the soldier is eventually assigned. The Kalergis Study recommended assignment of an extra tank crewman per tank in selected units. An evaluation program is in progress to determine the effect on units of adding the extra crewman. The measure of effectiveness of this course of action is its effect on crew stability. The fundamental question is one of how long the crew stays together as a crew. To the extent that the extra crewman contributes to crews staying together, the idea of assigning the extra crewman has merit. ARTS should followup on the evaluation of the extra crewman, and in addition should measure the effects of turnover rates on crew stability in selected units.

e. Support to be provided by ARI. ARTS is to be provided substantial support from ARI--especially in terms of defining learning and forgetting curves, and related human factors analyses. While this information is badly needed, it represents work that the human resources community should have been doing for the last thirty years, but has not done. I therefore question whether or not they can provide this kind of data to a satisfactory level of resolution in the time allowed.

f. Alternatives T_ITs. Discontinue consideration of a contract training system by which AIT is funded out of P2--in effect the receiving command buy the training it wants from the training base.



Copy furnished:
MG Merryman

HEADQUARTERS
UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
OFFICE OF THE COMMANDING GENERAL
FORT MONROE, VIRGINIA 23651

ATCG

22 February 1978

MEMORANDUM FOR: BG BROWN

SUBJECT: Recap of ARTS SAG, 14 February 1978

Following is guidance for the continuing study effort. My memorandum of 20 December 1977 recapping decisions of the 19 December SAG meeting remains in effect unless modified below:

a. Focus on critical issues 1 and 2.

#1 - Develop the resources and training programs required to achieve training proficiency within the current Total Army Individual and Collective Training System.

#2 - Develop a common costing program for training which accurately addresses and interrelates both institutional and unit training costs (dollars, people and time).

Using current levels of institutional training as a given, concentrate on the means to assure the mastery and maintenance of individual and collective skills (ARTEP and SM standards) in units. Means should include techniques to insure the maximum feasible concurrence between training for SM and ARTEP tasks and should also include frequency of training. Use examination of active units to gain insights into reserve component unit problems.

b. Address personnel turbulence as a fundamental issue. We must quantify turbulence conditions in operating commands before we can begin to explain its impact on training effectiveness. Report on progress at the next SAG.

c. Continue to work toward a 1985 training strategy to support the military strategy articulated in the Consolidated Guidance Memorandum. Address alternative concepts for RC and post mobilization training within this training strategy framework. Do not further consider DPS 040 type cuts.

ATCG

22 February 1978

SUBJECT: Recap of ARTS SAG, 14 February 1978

d. Try to focus on combat effectiveness by exercising BATTLE at Fort Leavenworth and varying parameters that are sensitive to training proficiency, such as probability of hit, aim time and concealment. Similarly, CATTS appears to be the best approach to measuring tactical readiness. Both BATTLE and CATTS/CAMMS offer the greatest potential for testing, since many training effects can be replicated to gather meaningful test samples.


STARRY

Copy furnished:
LTG Thurman
MG Seigle
Each SAG Member



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

26 May 1978

MEMORANDUM FOR RECORD

SUBJECT: Summary of 18 April 1978, Study Advisory Group (SAG) Meeting,
Army Training Study.

1. SAG III for the Army Training Study was conducted 18 April, 0900-1130 hours, at HQ TRADOC. Incl 1 contains a list of attendees.
2. Guidance for SAG III preparation was modified from the 22 February 1978 SAG II Memo (Incl 2) to the memorandums of 27 February 1978 (Incl 3) and 22 March 1978 (Incl 4). This essentially focused study guidance on the following critical issues:
 - a. Determine the resources and training programs required to achieve training proficiency within the current Army individual and collective training system.
 - b. Develop a common costing program for training which accurately addresses and interrelates unit training costs (\$/people/time).
 - c. Identify suitable measures of training proficiency and appropriate standards of training readiness applicable to a readiness reporting system.
3. The ARTS presentation (Incl 5) was directed primarily at the principal features of the Battalion Training Model and an update on Training Effectiveness Analysis for 1978 to include testing, management, and data collection.
4. There was no TRADOC MFR published of SAG III. ARTS activities were seen as proceeding in accordance with the guidance noted in paragraph 2 above; preparation for SAG IV was seen as a further update of the Battalion Training Model to include model development, data collection, best

ATCG-ATS

26 May 1978

SUBJECT: Summary of 18 April 1978, Study Advisory Group (SAG) Meeting,
Army Training Study.

battalion costing, optimal training program methodology, and battalion
training survey progress.

FOR THE DIRECTOR:



DAVID A. BUFNAGEL
COL, AD
Deputy Director

5 Incl

1. SAG III Attendees
2. 22 Feb 78 Memo
3. 27 Feb 78 Memo
4. 22 Mar 78 Memo
5. SAG III Agenda

PROSPECTIVE ARTSAG ATTENDEES

18 APR 78, 0900 - 1130

Group 1 - Principals:

<u>NAME</u>	<u>REPRESENTING</u>
GEN Starry	Chairman
LTG Baer	DARCOM
MG Siegle	DCST
MG Williams	DA DCSPER
BG Honeycutt	FORSCOM
BG Brown	ARTS
BG Creighton	DA DCSOPS
BG Noah	DCSRM
Mr. Allen	COA
Mr. Gompf	ASA (M&RA)
Mr. Hamilton	DA PA&E
Mr. Lester	DUSA (OR)
COL Coates	NGB
COL Troeschel	OCAR
Mr. Smith	DCSCD
LTC Ferguson	USAREUR

GROUP 2 - POCs:

<u>NAME</u>	<u>REPRESENTING</u>
COL Burba	ARTS
COL DiCillo	USMC LNO, TRADOC
COL Hufnagel	ARTS

GROUP 2 POCs continued):

COL Miller	FORSCOM
COL Motley	USAF LNO, TRADOC
COL O'Connell	DA DCSPER
COL Sharpe	DARCOM
LTC Bloedorn	ARTS
LTC Caldwell	ARTS
LTC Griffiths	TRADOC
LTC Fleming	NGB
LTC Sanders	OCAR
LTC Stipe	DA DCSOPS
LTC Westmoreland	DA PA&E
MAJ Blodgett	ARTS
MAJ Grube	TRADOC
MAJ Muir	USAREUR
MAJ Hallissey	TRADOC
MAJ Jackson	TRADOC
Mr. Kelly	ARTS

HEADQUARTERS
UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
OFFICE OF THE COMMANDING GENERAL
FORT MONROE, VIRGINIA 23851

ATCG

22 February 1978

MEMORANDUM FOR: BG BROWN

SUBJECT: Recap of ARTS SAG, 14 February 1978

Following is guidance for the continuing study effort. My memorandum of 20 December 1977 recapping decisions of the 19 December SAC meeting remains in effect unless modified below:

a. Focus on critical issues 1 and 2.

#1 - Develop the resources and training programs required to achieve training proficiency within the current Total Army Individual and Collective Training System.

#2 - Develop a common costing program for training which accurately addresses and interrelates both institutional and unit training costs (dollars, people and time).

Using current levels of institutional training as a given, concentrate on the means to assure the mastery and maintenance of individual and collective skills (ARTEP and SM standards) in units. Means should include techniques to insure the maximum feasible concurrence between training for SM and ARTEP tasks and should also include frequency of training. Use examination of active units to gain insights into reserve component unit problems.

b. Address personnel turbulence as a fundamental issue. We must quantify turbulence conditions in operating commands before we can begin to explain its impact on training effectiveness. Report on progress at the next SAC.

c. Continue to work toward a 1985 training strategy to support the military strategy articulated in the Consolidated Guidance Memorandum. Address alternative concepts for RC and post mobilization training within this training strategy framework. Do not further consider DPS 040 type cuts.

ATCG

22 February 1978

SUBJECT: Recap of ARTS SAG, 14 February 1978

d. Try to focus on combat effectiveness by exercising BATTLE at Fort Leavenworth and varying parameters that are sensitive to training proficiency such as probability of hit, aim time and concealment. Similarly, CATTS appears to be the best approach to measuring tactical readiness. Both BATTLE and CATTS/CAMMS offer the greatest potential for testing, since many training effects can be replicated to gather meaningful test samples.


STARRY

Copy furnished:
LTG Thurman
MC Seigle
Each SAG Member

ATCG

27 February 1978

MEMORANDUM FOR: BRIGADIER GENERAL BROWN, DIRECTOR OF THE ARMY TRAINING STUDY

SUBJECT: Additional ARTS Guidance

1. References:

a. Memorandum, ATCG, Recap of ARTS SAG, 19 December, dated 20 December 1977.

b. Memorandum, ATCG, Recap of ARTS SAG, 14 February 1978, dated 22 February 1978.

c. Memorandum, ARTS, Results of 14 February Study Advisory Group Army Training Study, dated 24 February 1978.

2. Reference a prioritized nine critical issues you presented at the first SAG on 19 December. Reference b reiterated the original guidance and focused your attention on critical issues 1 and 2 which are:

#1 - develop the resources and training programs required to achieve training proficiency within the current total Army Individual and Collective Training System.

#2 - develop a common costing program for training which accurately addresses and interrelates both institutional and unit training costs (dollars, people and time).

3 The purpose of this memorandum is to narrow the focus of ARTS on specific areas of interest and to provide guidance in preparing for the next SAG, currently scheduled for 18 April 1978.

4 Your initial charter was exceptionally broad and challenging. In these circumstances the staff effort you have devoted to training monographs is understandable. It has served to educate your staff on the background of selected issues they face. But this does not change the fact that the monographs are historical and descriptive, while our objectives are analytical and prescriptive. It is high time to shift gears.

5 Accordingly, do not use the monographs as a basis for eliciting opinions from commanders in units or at TRADOC schools. Rather, regard them as internal documents which have served their purpose. We do not

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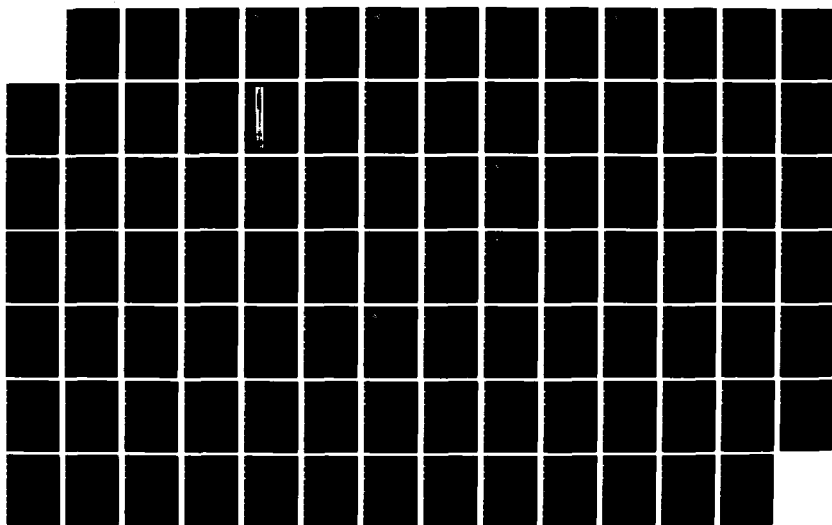
ARMY TRAINING STUDY: ADMINISTRATION(U) ARMY TRAINING
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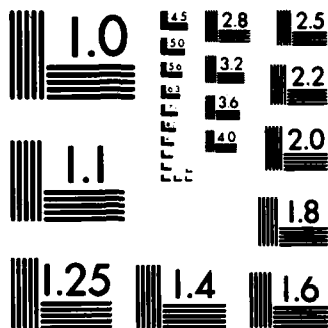
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

ATCG

SUBJECT: Additional ARTS Guidance

speculation; we need hard analysis on soecific EEA. In this regard, you should stop using such terms as "play books," subject to misinterpretation, and focus on what is required to make the Army Training System work effectively.

6. Your entire effort should be devoted to such analysis of evidence that can be derived from the analytic efforts of the several units and TRADOC schools and analytical and test activities in Training Effectiveness Analysis (TEA) 78.

7. What the Army needs is sound evidence concluded from solid analysis of data and proposals that will enable it to define its training needs more precisely and plausibly, and to relate these training needs to resources. Your focus should be on units. You should attempt to develop frequency of training criteria that are tied to resources and also to stated levels of readiness. Your priority should be to active units, not because they are more important but because we have better information on resource - training proficiency relations in active units than we have for Reserve Component units. Time permitting, you should attempt to describe plausible premobilization training strategies for Reserve Component units that will permit them to minimize the time between mobilization and deployment.

8. Specific questions on which your analysis should focus:

a. How can the Army maximize the integration of collective and individual training in units (to ARTEP and SM standards)?

b. How can the Army specify the frequency of training in ARTEP tasks?

c. How can the Army relate training in ARTEP tasks (including enabling individual tasks) to resources and to readiness? (What I have in mind here is a resource - related hierarchy of training, including frequency of such training, tied specifically to levels of readiness.)

9. In analyzing the above questions, you should gather and assess data on the following:

a. Can we demonstrate the relationship between training frequency and training proficiency?

b. How does personnel turbulence affect training proficiency? Should we attempt to attenuate personnel turbulence or accomodate to it?

ATCG

SUBJECT: Additional ARTS Guidance

10 The SAG meeting scheduled for 18 April should be devoted to a description of work in progress, problems and plans related to the above specific issues. Subsequent to your return from Europe I would like to meet with you to discuss the five excursions alluded to in reference b paragraph 1d(1), with specific emphasis on training base alternatives and application of study concepts to a division. This is on the presumption that with regard to the other three excursions set forth in reference c guidance contained in this memorandum is sufficient. Should that not be the case we can discuss the remaining three alternatives as well.

Starry
STARRY



DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
FORT MONROE, VIRGINIA 23651

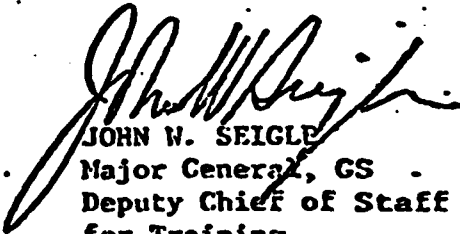
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22 March 1978

MEMORANDUM FOR RECORD

SUBJECT: Focus of Army Training Study (ARTS) Effort

1. Subsequent to the ARTS Study Advisory Group (SAG) meeting on 14 February 1978, General Starry concluded that ARTS cannot reasonably be expected with its small staff (twelve officers) to provide substantive, analytic work across the entire broad area it is investigating during the brief time remaining to it. He further concluded that, using the useful model and other work it has already accomplished, ARTS has a solid basis for focusing on the key set of problems which must be unravelled first if the Army is to be able to determine what training is necessary and secure adequate resources to support such training. This is the problem of relating the number of tasks (both individual and collective) that units must master, the necessary frequency of training to maintain competence, and the resources required.
2. Accordingly, Director, ARTS was directed on 13 March 1978 to focus his remaining effort on this set of tasks. Although he will concentrate on Active Army units because of data availability and remaining time, the findings from this effort should inform future work on Reserve Component training—which poses an even more difficult set of issues—and on training conducted by TRADOC. This directive affirms the interim ARTS finding that training base optimization must proceed from an optimization of tasks and resources for units; it cannot precede it.


JOHN W. SEIGLE
Major General, GS
Deputy Chief of Staff
for Training

DISTRIBUTION:
Each ARTS SAC Member
Director, ARTS

PROPOSED AGENDA FOR ARTS STUDY ADVISORY GROUP

(18 APR 78, 0900-1130)

I. Introduction	BG Brown	05 min
II. Battalion Training Model	COL Burba	40 min
SAG Guidance		
Expressed & Implied Tasks		
P2 Mission Model Capabilities		
Battalion Training Model (BTM)		
- Scope		
- Major Assumptions		
- Description		
Data Collection		
Challenges		
BTM Summary		
III. TEA 78 Overview	LTC Bloedorn	20 min
Testing		
Management System		
Data Use		
Data Gaps		
	Break	15 min
IV. Discussion		70 min



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

12 June 1978

MEMORANDUM FOR RECORD

SUBJECT: Summary of 31 May 1978 Study Advisory Group (SAG) Meeting,
Army Training Study

1. SAG IV for the Army Training Study was conducted 31 May 1978, 0900-1200 hours, at HQ TRADOC. Incl 1 contains a list of attendees.
2. The ARTS presentation (Incl 2) was directed primarily at an update of progress made on the Battalion Training Model to include model development, data collection methodology, costing, first generation training program methodology and selected, preliminary battalion training survey results.
3. There was no TRADOC MFR published of SAG IV. ARTS activities were seen as consistent with previous SAG guidance. Preparations for the last SAG, 8 August, were seen as focusing on conclusions, recommendations and observations of the study to include distribution of an ARTS Report and Data Book.

FOR THE DIRECTOR:

2 Incl
as

David A. Hufnagel
DAVID A. HUFNAGEL
COL, AD
Deputy Director

PROSPECTIVE ARTSAG ATTENDEES

31 MAY 78, 0900 - 1200

Group 1 - Principals:

GEN Starry

Chairman

Name

REPRESENTING

MG Haldane

FORSCOM

MG Siegle

DCST

Mr. Blanchard

DARCOM

BG Sweet

DA DCSPER

BG Jeness

Long-Range Training
Base Study

BG Brown

ARTS

BG Creighton

DA DCSOPS

Mr. Gompf

ASA (M&RA)

Mr. Hamilton

DA PA&E

Mr. Lester

DUSA (OR)

COL Pokorny

DCSCD

COL Redding

DCSRM

COL Troeschel

OCAR

Mr. McCauley

COA

LTC Blevins

NGB

MAJ Muir

USAREUR

Group 2 - POCs:

Name

REPRESENTING

COL Burba

ARTS

COL Clark

TRADOC

COL Hufnagel

ARTS

GROUP 2 - (continued)

COL Miller	FORSCOM
COL Nerone	TRADOC
COL Sharpe	DARCOM
LTC Alley	DA DCSPER
LTC Richter	DA DCSOPS
LTC Sanders	OCAR
LTC Westmoreland	DA PA&E
MAJ Bluhm	ATB
MAJ Hallissey	TRADOC
Mr. Farmer	TRADOC
Mr. Kaplan	ARTS Contractor (Actuarial Research Corp)
Mr. Lynch	COA

PROPOSED AGENDA FOR ARTS STUDY ADVISORY GROUP

(31 MAY 78, 0900-1200)

- | | | | |
|------|---|-----------|---------|
| I. | INTRODUCTION AND ARTS PRODUCTS | BG BROWN | 15 MIN |
| II. | BATTALION TRAINING MODEL | COL BURBA | 45 MIN |
| | MODEL DEVELOPMENT PROGRESS | | |
| | DATA COLLECTION METHODOLOGY | | |
| | "BEST" BATTALION COSTING PROGRESS | | |
| | BATTALION TRAINING SURVEY PROGRESS | | |
| | FIRST GENERATION TRAINING PROGRAM METHODOLOGY | | |
| | SUMMARY | | |
| | BREAK | | 15 MIN |
| III. | DISCUSSION | | 105 MIN |



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

8 August 1978

MEMORANDUM FOR RECORD

SUBJECT: Summary of 8 August 1978 Study Advisory Group (SAG) Meeting,
Army Training Study

1. The final SAG for the Army Training Study was conducted 8 August 1978, 0900-1200 hours, at HQ TRADOC. Inclosure 1 contains a list of attendees.
2. The ARTS presentation followed the agenda at Inclosure 2 and was directed primarily at study group conclusions (Inclosure 3) and recommendations (Inclosure 4) contained in the draft ARTS Final Report Summary volume. These conclusions and recommendations require staffing within TRADOC before transmittal to DA for further staffing and CSA approval.
3. Inclosure 5 contains SAG approved study group recommendations concerning BTM, TEA, and liaison follow-on activities. The SAG also noted the dual ARTS organization to implement milestones after 8 August (Inclosure 6); these milestones are directed at two major activities: coordination of the final study report and continued BTM development.

FOR THE DIRECTOR:

David A. BFNAGEL

DAVID A. BFNAGEL
COL, AD
Deputy Director

- 6 Incl
1. SAG V Attendees
 2. SAG V Agenda
 3. ARTS Conclusions
 4. ARTS Recommendations
 5. ARTS Follow-on Activities
 6. ARTS Follow-on Milestones

PROSPECTIVE ARTSAG ATTENDEES

8 AUGUST 1978, 0900-1200

GROUP 1 - Principals:

GEN Starry

Chairman

LTG(P) Shoemaker

FORSCOM

NAME

REPRESENTING

LTG Baer

DARCOM

MG Faith

DA DCSOPS

MG Seigle

DCST

Mr. Goode

TRASANA

BG Honeycutt

FORSCOM

BG Williamson

USAREUR

BG Brown

ARTS

BG Woodmansee

DCSCD

BG Noah

DCSRM

Mr. Allen

COA

Mr. Gompf

ASA (M&RA)

Mr. Hamilton

DA PA&E

Mr. Lester

DUSA (OR)

COL Acree

NGB

COL Greynolds

DA DCSPER

COL Harrington

ATB

COL Lumpkins

OCAR

GROUP 2 - POCs:

<u>NAME</u>	<u>REPRESENTING</u>
COL Burba	ARTS
COL Hufnagel	ARTS
COL Miller	FORSCOM
COL Rabin	TRASANA
COL Sharpe	DARCOM
LTC Alley	DA DCSPER
LTC Bloedorn	ARTS
LTC Hatcher	ARTS
LTC Fleming	NGB
LTC Richter	DA DCSOPS
LTC Sanders	OCAR
LTC Sobieski	ARTS
LTC Stone	ARTS
LTC Zielenski	ARTS
MAJ Blodgett	ARTS
MAJ Clements	ATB
MAJ Gillespie	ARTS
CPT Johnson	ARTS
Ms. Brown	ARTS
Mr. Farmer	TRADOC
Mr. Kaplan	ARTS Contractor (Actuarial Research Corp)
Mr. Kelly	ARTS

ARMY TRAINING STUDY
STUDY ADVISORY GROUP
8 AUGUST 1978

BRIEFING OUTLINE

- | | |
|---|--------------|
| 1. Mission/Guidance | BG Brown |
| 2. Summary of Actions Completed (General) | BG Brown |
| Final Report Summary | |
| Data Book | |
| BTM | |
| TEA | |
| Concepts | |
| 3. Battalion Training Model (BTM) | COL Burba |
| BTM Development | |
| Data Sources | |
| Training Program Formulation | |
| Program Analysis | |
| Tentative Results and Conclusions | |
| Follow-on Actions | |
| Recommendations | |
| 4. Training Effectiveness Analysis (TEA) | LTC Bloodorn |
| Purpose | |
| Scope | |
| Conclusions | |
| Recommendations | |
| 5. ARTS Wrap-up | COL Hufnagle |
| Initial Distribution of Report | |
| Follow-on Actions | |
| 6. Conclusions and Recommendations | BG Brown |
| 7. Discussion | GEN Starry |

CONCLUSION

VIEW TRAINING AS A TOTAL SYSTEM
AN ARMY READINESS TRAINING SYSTEM

INCLUDING:

- STANDARD OF EXCELLENCE. 95% COMBAT READY VERIFIED BY EXTERNAL TEST
- TRAINING EFFECTIVENESS ANALYSIS (TEA). PROVIDING OBJECTIVE INFORMATION NEEDED TO ENSURE SYSTEM EFFICIENCY AND EFFECTIVENESS
- DESCRIPTIVE TRAINING PROGRAMS. BTM-DESIGNED, TEA-SUPPORTED - UNIT CAN ATTAIN 95% ARTEP/SM STANDARD OF COMBAT READY
- PRESCRIPTIVE TRAINING RESOURCE MODEL-BATTALION TRAINING MODEL. BTM CAN USE TEA DATA TO PRESCRIBE RESOURCES REQUIRED TO DEVELOP COMBAT READINESS ON DESCRIPTIVE TRAINING PROGRAMS
- PRESCRIPTIVE COSTING METHODOLOGY. A UNIFORM APPROACH AND DATA TRAIL IS NEEDED TO ENSURE COMPARABILITY OF RESOURCE VALUE ACROSS TRAINING SYSTEM

NINE KEY RECOMMENDATIONS

- ADOPT ARTS MODEL AS CONCEPTUAL FRAMEWORK OF ARMY READINESS TRAINING SYSTEM.
- ESTABLISH 95% AS SOLE ARMY STANDARD OF "COMBAT READY" WITH TRAINING READINESS VERIFIED BY CREDIBLE EXTERNAL EVALUATION.
- IMPLEMENT TEA '79 AND TEA '85 PROGRAMS COMPLETE WITH DATA BASE.
- CONTINUE DEVELOPMENT OF PROTOTYPE BTM. EXPAND TO OTHER BATTALION LEVEL PROGRAMS.
- IMPLEMENT TRAINING PROGRAMS USING BATTLE/TRAINING DRILLS COMPLETE WITH "HOW TO TRAIN" GUIDANCE PROVIDED BY TRADOC.
- CONTINUE DEVELOPMENT OF ARTS COSTING METHODOLOGY AS BASIS FOR DEVELOPMENT OF UNIFORM ARMY COSTING METHODOLOGY.
- VALIDATE OFFICER AND NCO PROFICIENCY ON INDIVIDUAL/COLLECTIVE TASKS THEY MUST TRAIN AND SUPERVISE.
- PROVIDE BTM - JUSTIFIED RESOURCES (PEOPLE, DOLLARS, TIME) IN BALANCE TO ENSURE GREATEST TRAINING BENEFIT FROM EACH - SEPARATELY AND IN COMBINATION.
- SET MANAGERIAL GOALS FOR PERSONNEL CONDITIONS (TURBULENCE, OFFICER/NCO FILL, PERCENTAGE NOT PRESENT FOR TRAINING) WHICH BTM ANALYSIS HAS SHOWN TO BE TRAINING READINESS SENSITIVE.

RECOMMENDATIONS

1. BATTALION TRAINING MODEL

A. CONTINUE MODEL DEVELOPMENT IN THE FOLLOWING AREAS:

- (1) TRAINING AREA/FACILITY AVAILABILITY
- (2) REFINE EQUIPMENT AVAILABILITY
- (3) TRAINING PROGRAMS ALL ON LINE
- (4) "SCRUB" ENTIRE MODEL
- (5) OTHER TYPE BATTALIONS

B. CONDUCT PROGRAM ANALYSIS IN THE FOLLOWING AREAS:

- (1) MENTAL CATEGORY IIIA, IIIB, AND IV IMPACT ON
READINESS
- (2) REDUCTION OF TRAINING BASE; IMPACT ON READINESS
- (3) READINESS AS FUNCTION OF REDUCED DOLLARS
- (4) EQUIPMENT FILL/AVAILABILITY VS READINESS

2. TRAINING EFFECTIVENESS ANALYSIS

A. CONTINUE TO DEVELOP AND USE DATA BASE IN SUPPORT OF BTM

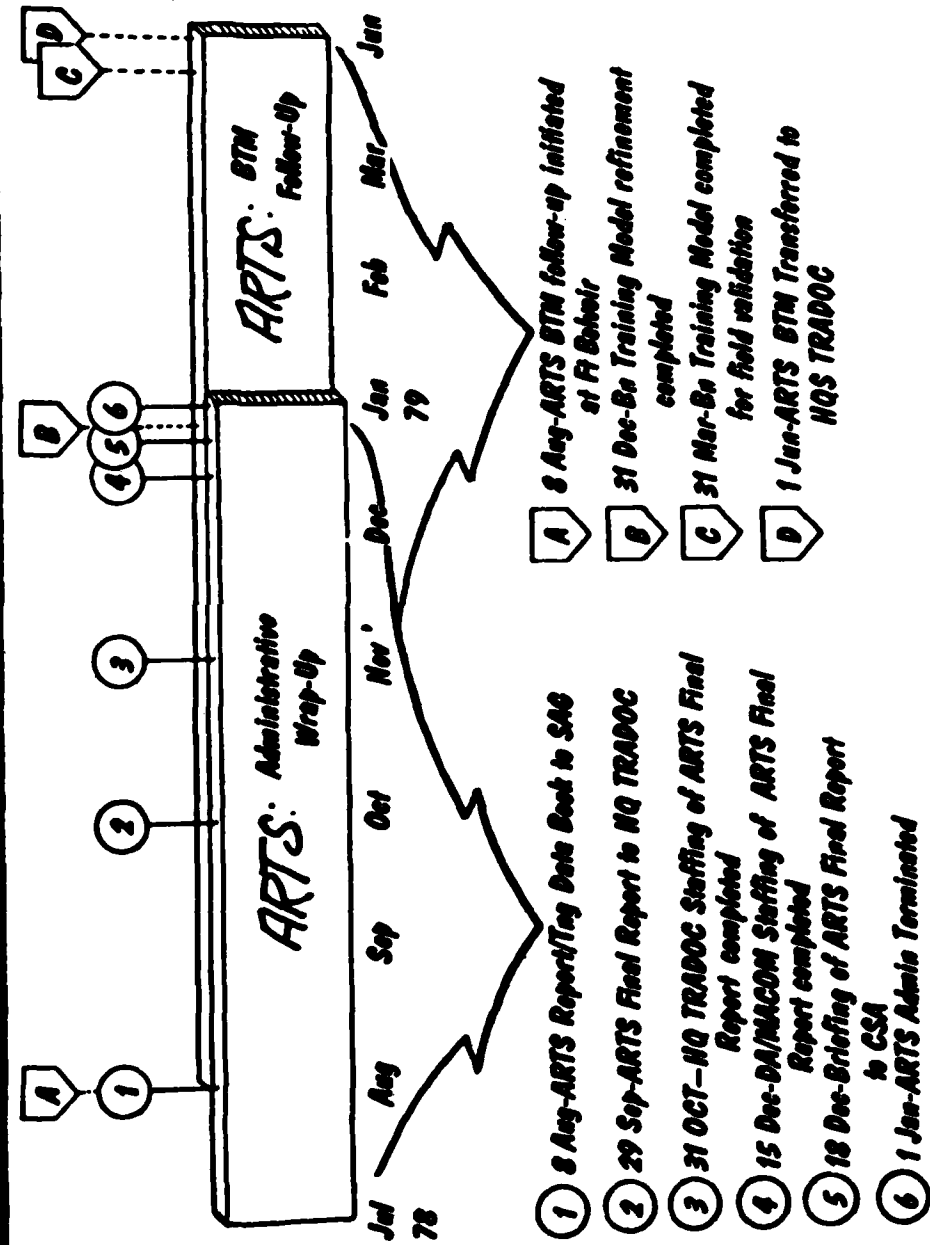
B. CONTINUE TO CONDUCT TEA '79 ONGOING TESTS WITH SYSTEM
WORK TEAMS AND DIVISION WORK TEAMS UNTIL 1 OCTOBER 1979

3. ARTS LIAISON ACTIVITIES

CONTINUE DIRECT LIAISON WITH HQDA, MACOMS, AND CONSULTANT
GROUP AGENCIES IN ORDER TO CLARIFY ANY QUESTIONS WHICH
ARISE AS A RESULT OF INITIAL/FINAL DISTRIBUTION OF THE REPORT.



ARTS MILESTONES



INCH 6

CHAPTER III

STUDY GROUP ORIENTATION SESSIONS

1. Initial orientations for the ARTS Group were conducted during the period 25 to 29 October and included the following speakers:

<u>NAME</u>	<u>AGENCY</u>
LTG Meyer	DA DCSOPS
MG Hunt	DARCOM
MG Otis	CACDA
MG Menetrey	CATRADA
MG Seigle	TRADOC DCST
MG Harrison	RETO Study
BG Brown	ARTS
BG Noah	TRADOC DCSRM
COL Donovan	DA PA&E
COL Hart	TDI
Mr. Haggard	ARI

2. This chapter contains a summary of remarks made during the orientation sessions.



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

13 December 1977

MEMORANDUM FOR RECORD

SUBJECT: Initial Orientation of Army Training Study Group

Initial orientation for the ARTS Group was conducted 25 to 29 October 1977 at Fort Belvoir; major observations, guidance, and discussion points are summarized below:

1. LTG Meyer, DA DCSOPS.

a. Why ARTS:

- (1) Optimize use of complex equipment.
- (2) Need to properly train AC/RC under peacetime/wartime conditions.
- (3) Better management of time and resources.

b. Major effort will be to articulate how readiness is related to the training dollar. Many grass root actions have been accomplished in this area, but the study needs to pull them together.

c. Four specific areas of interest:

- (1) Near-term versus long-term.
 - (a) Hopefully, our current training program makes sense. If so, make any necessary adjustment; if not; call a spade a spade.
 - (b) Address the 1985 time period; SSI '85 Environment effort should help.
- (2) High - low mix. The problem of maintaining proficiency and training on more sophisticated equipment in Europe than CONUS; also includes Europe/CONUS force imbalance for certain weapons.
- (3) Transition from peacetime to wartime. We must look beyond the

SUBJECT: Initial Orientation of Army Training Study Group

first battle and be able to make the necessary transition to war without upsetting the training base.

(4) Active and Reserve Components. What is the maximum level of peacetime training that can be expected of RC? Company? A mutual understanding is needed between AC and RC concerning the training objectives which are realistically attainable by RC.

d. Recognize the improvements in force readiness at the expense of unit readiness and its corresponding impact on reducing the amount of equipment in CONUS available for AC/RC training.

2. MG Hunt, DARCOM.

a. Troops want to be challenged; they want to feel confident that the training program and equipment they have are the best. The Marines offer a good example.

b. Our training system must, in fact, be a formalized system; i.e., like the logistics and personnel systems. Training must be task-oriented, performed to standards, and multilevel in nature.

c. More field evaluation is needed of our training programs. Focus of past efforts has been on individual vice unit training.

d. The educational level of the soldier is not improving while the complexity of the weapons with which he must train is increasing. This presents a major challenge to the training manager. The central problem of training is not learning, but the management of learning.

e. Eighty percent of learning is by sight (TEC and ITDT take advantage of this).

f. Training should focus on the crew rather than the individual due to personnel turbulence, variety of makes/models of equipment, and the many interdependent skills required to operate complex weapons.

g. The Army should set a goal concerning the size of the training base, i.e., about 8-10 percent of the force.

h. Extension training courses should be geared to learning tasks which are not being done well in the field.

i. Solution to postmobilization training lies in proper utilization of Training Divisions and USAR Schools.

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j. SQT and ARTEP are umpire rich; problem is standardizing the umpire to get better objectivity.

k. Instructional efficiency = task/time to teach. We should freeze the numerator or standard and vary the denominator based on student capability.

l. Why do officers require troops to produce on tests like the SQT but we do not tests ourselves?

m. Equipment must be designed with the man-machine interface in mind. This includes the availability of proper maintenance tools and documents.

n. The Soviets don't train much on their own equipment; training devices, simulators, and equipment pools should be considered, but remember that simulators, etc., also require maintenance.

3. MG Otis, CACDA.

a. Someone needs to be looking at the sum total of all training requirements when they hit us in 1985-1986. Example cited included the large number of computer systems (50) entering the Army by 1984 and the complexity of programmed weapons systems.

b. Training should be a separate line item in the budget.

c. Two major training problems:

(1) Turbulence (more important to unit effectiveness than training).

(2) Lack of authorization for what is perceived as required support levels.

4. MG Menetrey, CATRADA.

a. Combined arms doctrine is essentially based on brigade level and higher whereas unit training programs and resources focus on the battalion.

b. Use of battle simulation techniques are good training tools, but they have not been successful for evaluation purposes due to questionable validity of input data and basis of standard used. They can be used in a comparative manner.

c. ARTEP is the best unit training program available today, but it

SUBJECT: Initial Orientation of Army Training Study Group

is not precise enough for an evaluation tool except when combined with the commander's judgment.

5. MG Seigle, TRADOC DCST.

a. The study's major challenge is to determine what is required to train to competence, and then to do it at least cost.

b. While it now may not be politically opportune for reductions of the military force structure, we can expect close scrutiny of the training base. It is not just a case of having training efficiency, but one of training effectiveness as well, which, in turn, must be quantified.

c. In addressing the study objectives, the primary effort should be to provide insights and a road map (rather than specific answers) of what has to be done.

d. The soldier's manual and ARTEP provide the basis for individual and collective training respectively, and they should be your anchor points.

6. MG Harrison, Review of Education and Training of Officers.

a. RETO will determine officer training and education requirements to meet Army mission needs as well as individual career development needs. Policies and programs, as well as a plan for implementation within a constrained resource environment, will be developed.

b. RETO milestones lead to integration of initial major study findings into the FY 80-84 Army Program.

c. Two major data collection efforts are proceeding simultaneously:

(1) A survey mailed to more than 16,000 officers and warrant officers to determine what the officer corps believes is necessary and expects in education and training.

(2) A detailed analysis by proponents of each OPMS specialty to determine requirements by position and type, duty modules applicable to each position, best methods for acquiring performance skills for each duty module, and a number of other items.

d. Similar efforts (survey and position analysis) will be undertaken for non-OPMS specialties with primary focus on military training and education.

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SUBJECT: Initial Orientation of Army Training Study Group

e. One of the biggest issues facing the study group is finding a system that lets one know when an officer is qualified for his job.

f. The value of organizational effectiveness was stressed and use of General Officer brainstorming sessions was encouraged.

7. BG Brown, Director ARTS.

a. Keep focus on study objectives and Army of the 80's.

b. Ensure training programs are compatible with new equipment.

c. Visualize our strategy as designing for 5th battle (D60-90); upgrading for first battle; attenuating for 15th battle (D greater 180).

d. Training policies must support rapid transition of a peacetime cost-effective Army to wartime conditions. Who takes over a high-quality cost-effective training base if mobilization is necessary?

e. How should training readiness be measured? What is analogous to the ARTEP as the SQT is to the soldier's manual? EDRE? ORI? TAC EVAL?

f. The major modern battlefield challenge is to accomplish tasks 95 percent correctly; this is critical when outnumbered.

g. The design capability of weapons systems must be considered in conjunction with training programs, NCO loss, available training time, etc. What is the corresponding impact on combat effectiveness and what models (OMNIBUS?) are available to make the link?

h. Troops expect that they will have sufficient resources to train properly due to recent focus on training developments. Thus, the issue of quality versus quantity is important to the study.

i. A well-trained, educated, self-disciplined soldier is crucial to the success of the first battle; he will take the initiative on his own to overcome challenges and be a winner. What training programs are necessary to develop and maintain self-discipline and to capitalize on our strong points?

j. Do we need better management training programs so our leaders can optimize use of resources for training and demonstrate professional competence? Coordinate this effort with Harrison Study.

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SUBJECT: Initial Orientation of Army Training Study Group

k. Tactical readiness and simulation exercises (CAMMS/Dunn-Kempf/TEWT) are available tools for interoperability training and for improving the training of our leaders without using valuable troop time. They can also assist in bridging training proficiency and combat effectiveness.

l. The concept of Battalion Field Training Days may offer the link between training resources and programs (SQT, ARTEP). Training readiness must be tied to a corresponding level of resources.

m. Think Total Army throughout the study. This is applicable to tactical, administrative, and management training programs.

8. BG Noah, TRADOC DCSRM.

a. The ability of the Army to successfully defend its need for various new weapons systems is in part due to the availability of good cost-effective, analytical data. Similarly, our training programs must be supported by a cost-training-effectiveness analysis. In order to do this, training programs and training readiness will likely have to be quantified.

b. Congress and OMB will be looking harder at Army training base costs (i.e., OMB issue 17) particularly since we generally do not look as favorable as other Services (such as student/instructor ratios). Unless we defend the best institutional/force training mix with hard analytical data, OMB proposals of base closures, 20 percent cuts across-the-training-board, 25 percent BCT reductions, reduction or elimination of specialized skill training, consolidation of helicopter training, and reduction of officer professional development training by up to 75 percent could materialize. TRADOC has made progress in this area (OSUT, self-pace and exportable training, correspondence courses, ATB consolidation), but much work remains to be done. We should also see how the other Services conduct their training to get ideas on this important issue. It may be that part of the problem is that there should be common costing procedures established within DOD.

9. COL Donovan, DA PAGE.

a. Be aware of sub-optimization--trying to turn out the best possible product from the institution to the field; this drives the training base. Critics will charge that people today are in the force longer and this gives them more time to improve in effectiveness. Should AIT be conducted in units when obtaining skills in the civilian community are costly? If a certain type of training is vital to force effectiveness, are there trade-offs within the training base to accommodate this training?

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SUBJECT: Initial Orientation of Army Training Study Group

b. Recognize that in improving force readiness, there may be degradations to unit readiness, i.e., equipment shortfalls which in turn influence training readiness.

c. Should Active and Reserve Components have the same training standards? Is it feasible to have different peacetime training standards but the same deployment standards? Can RC combat units realistically deploy as battalions, or should their training be geared to lower organizational levels?

d. Does the impact of 90,000 women in the Army on training readiness require modification of our training programs?

10. COL Hart, Training Development Institute.

a. Many NCOs trained in the new job-focused NCO courses are frustrated when they confront officers who do not understand SQT/ARTEP-based training.

b. Current training programs focus too much on Active Components rather than on RC and postmobilization training; the latter two are difficult to tackle.

c. Look at the Soviet total training package for ideas; they have excellent examples.

11. Mr. Donald Haggard, ARI (Learning Curves).

a. Commonality (taxonomy) of tasks cannot be shown by learning curves; different tasks have different curves. Curves established today change tomorrow due to improved or changed training conditions.

b. Skills lost quickly include complex verbal and procedural, and fine precision. Skills easily retained include simple motor and verbal. We need to identify that type of learning which decays slowly versus that which is lost quickly. This is important for new, sophisticated equipment.

c. Major problems

(1) Of all the thousands of tasks to be performed, which ones are considered critical to measure?

(2) What is the period of refresher training for long-term learning?

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SUBJECT: Initial Orientation of Army Training Study Group

(3) Training conditions vary and generally are not predictable, thus forcing a diagnostic approach (vice cyclic) to training.

(4) High support costs.

d. Current SQTs generally measure skills which are not lost rapidly vice ARTEP and crew skills which show faster decay.

FOR THE DIRECTOR:



DAVID A. HUFNAGEL
COL, AD
Deputy Director

CHAPTER IV

SENIOR OFFICER SEMINARS

1. Senior Officer Seminars for the ARTS Group were conducted during the period 27 October 1977 to 11 May 1978 and included the following speakers:

<u>NAME</u>	<u>DATE</u>	<u>PAGE</u>
LTG E. C. Meyer (See Chapter III)	27 Oct 77	III-2
GEN B. C. Clarke, USA Ret	30 Nov 77	IV-2
GEN H. K. Johnson, USA Ret	3 Jan 78	IV-6
GEN A. P. O'Meara, USA Ret	23 Jan 78	IV-9
GEN B. Palmer, USA Ret	25 Jan 78	IV-14
GEN F. J. Kroesen	24 Feb 78	IV-19
GEN G. S. Blanchard	28 Feb 78	IV-23
GEN W. E. DePuy, USA Ret	13 Mar 78	IV-26
MG H. Mohr	20 Mar 78	IV-30
LTG A. S. Collins, USA Ret	22 Mar 78	IV-35
GEN J. R. Guthrie	4 Apr 78	IV-38
GEN D. A. Starry	11 May 78	IV-41

2. This chapter contains a summary of remarks made by each of the senior officers.



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

7 December 1977

MEMORANDUM FOR RECORD

SUBJECT: Conference with GEN Bruce C. Clarke, USA, Ret., 30 November 1977

1. GEN Clarke made the following points during his discussion with the study group:

a. Starting with general officers, leaders should be exposed to ARTS. Commanders are interested in things they understand.

b. Teams, both combat and staff, help to win wars. Training, police call, and details should be done by teams. Team leaders (squad leaders, platoon leaders) should handle minor discipline.

c. Teams are different. Troops, even though school trained, must learn to serve on a particular (i.e., Brown's, Clarke's) team.

d. Motivation is a key. If troops have a sense of urgency, training time can be cut.

e. The MVA soldier has the lowest level of boredom of any soldier he has observed in 50 years.

f. Critique is important--let leaders command their units; then critique them so that they can understand.

g. Motivate the lower third of the troops.

h. Compete against standards, not unit against unit--reward those who show outstanding progress.

i. To replace losses sustained during first week of combat in Germany, CONUS divisions will have to be broken up.

j. Fifteen hours of training a week is sufficient to keep a unit at the proper state of readiness.

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7 December 1977

SUBJECT: Conference with GEN Bruce C. Clarke, USA, Ret., 30 November 1977

k. Use of movable weekends enables units to use training areas seven days a week.

l. Throughout history, surprise attacks have taken place on weekends.

m. Integrity--50 percent of officers joining the Army come from schools where no honor system exists.

n. Underwrite mistakes.

o. Techniques of leadership:

(1) Staff officers are assistant coaches - they help produce teams.

(2) The IG should tell the commander what is happening.

(3) Whenever time is available, soldiers should be told why an order is important.

(4) Avoid procrastination; papers should not be held in baskets since an officer is no smarter after two weeks of waiting.

(5) Praise is important.

p. Compartments--the G1, G2, G3, G4 staff system contains too many compartments for a modern army--staff officers just write notes to one another.

q. Special Staff officers should not be farmed out to General Staff officers.

r. Inspections--learn before you inspect. Look at a few points each time.

s. Many people can be aggressive when not inhibited by experience or responsibility.

t. The only war that can be won in the future is the war which is deterred.

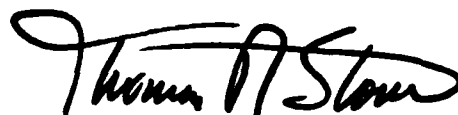
ATCG-ATS

7 December 1977

SUBJECT: Conference with GEN C. Clarke, USA, Ret., 30 November 1977

2. GEN Clarke briefly discussed the inclosure which outlines leadership techniques used by outstanding commanders.

1 Incl
as


THOMAS R. STONE
LTC, FA

THE TECHNIQUES OF THOSE WHO HAVE BEEN

OUTSTANDING COMMANDERS

1. They were practical planners.
2. They issued good, timely, and adequate directives that not only could be understood but that could not be misunderstood.
3. They adequately coached their staffs and subordinates in how to play on their teams.
4. They were good and constant observers of situations and results.
5. They critiqued their staffs and subordinates periodically; pointing out the good and the not-so-good actions, and giving more coaching when needed.
6. They were able to motivate their people to carry out well their instructions and duties.
7. They were skilled in performing these techniques effectively.
8. They did not procrastinate.
9. They did not fail to recognize outstanding results produced by their subordinates and to publicize them as appropriate.
10. They kept this card on their desks, read it often and followed it:

AN ORGANIZATION DOES WELL ONLY

THOSE THINGS THE BOSS CHECKS

- GENERAL BRUCE C. CLARKE



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

4 January 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with GEN Harold K. Johnson, USA, Ret., 3 January 1978

General Johnson made the following points:

1. In everything we do in the Army we need to deal with people. The finest theoretical solutions in the world won't work if people can't understand them or don't believe in them.

2. He related his experiences in moving a battalion to Korea during the war.

a. Fillers had 8 weeks of individual training and no unit training.

b. His unit took relatively high casualties but never "broke."

General Johnson attributed this to the fact that he had good key NCOs and had stabilized his officers.

3. Leaders who are determined to succeed are the key to unit success.

4. He discussed a historical example of the 1st Cav Div deployment to RVN.

a. CONARC and the Division Commander did not believe the unit was ready; it needed more training, repair parts, etc.

b. General Johnson convinced the Division CG that they could be ready if he (CG) set the attitude. Soon after arrival in RVN, two helicopter companies of the Cav extracted a unit of the 101st which was in trouble and the "success mold" was set. Confidence is an important ingredient of performance.

5. Personal perspective: The Army is a great reservoir of individual skills, rather than units. Skills can be put together to get any job done. He remarked that this philosophy was not universally accepted.

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4 January 1978

SUBJECT: Conference with GEN Harold K. Johnson, USA, Ret., 3 January 1978

6. Turbulence in the Army is a fact of life -- stabilization is not. We can stabilize certain people (officers and key NCOs) who make the unit "go" without hurting their professional development. At some point we have to ask officers/NCOs what they will do for the Army rather than to expect what the Army will give to them, i.e., civilian schooling, War College, etc.
7. Training management has not been emphasized. Soldiers have plenty of time to train, but leaders do not know how to use their time or they are tied up with other duties.
8. The study must address how much time is taken up by nontraining post support. There are certain standards of unit and installation house-keeping that are the enemies of training.
9. Combat effectiveness is very subjective; it can be the look in a man's eye. It might be measured by general demeanor, discipline (neat/clean soldiers) and maintenance of weapons.
10. Standards must be established and maintained.
 - a. Standards of weapons system maintenance.
 - b. Standards of unit housekeeping (training detractors).
 - c. Standards of installation housekeeping (training detractors).
 - d. Standards of individual proficiency.
 - e. Standards of team proficiency.
 - f. Standards of unit proficiency.
11. ARTS is definitely needed, but it may have a hard time communicating because it uses complicated terms.
12. A trained, combat ready unit is like a hearty soup. The beans are there -- men; the equipment is on hand -- tomatoes; ammunition and POL have been provided for -- potatoes; prescribed training has been completed, presumably successfully -- seasoning; and then the touch of the cook -- a dash of wine, perhaps -- leadership. Clearly not all inclusive, but it conveys the idea.
13. It is imperative to establish the highest practical level of Reserve Component (RC) training that can be expected in peacetime--this is probably company level for Infantry units but it might be only platoon level. Some training of battalion, brigade, and division staffs can be accomplished separately from training involving the men in the unit.

ATCT-ATS

4 January 1978

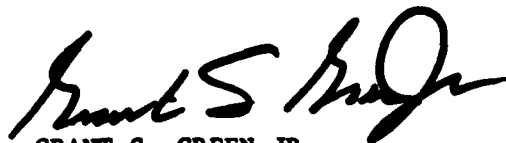
SUBJECT: Conference with GEN Harold K. Johnson, USA, Ret., 3 January 1978

But no RC unit can be expected to mobilize and move out without a sound training program.

14. All of the Services will continue to be confronted with budget constraints. ARTS is a part of how to beat the constraints. One less week in BCT or AIT means fewer people and less dollars for support. No post-mobilization training for Reserve Component units means a regular force that can bridge the gap between the outbreak of hostilities and movement of the mobilized unit, or preferably the date of first enemy contact.

15. The solution to the overall problem is an entirely new concept of training. Work on the skills of the individual soldier, accompanied by physical and mental conditioning. Work on the teamwork of the leaders, at the levels at which they perform. Teamwork can start with fire team leaders in its most basic state. Periodically, the soldiers will have to be involved, but less frequently than the current system provides.

16. This is a big problem and it has never been solved by the Army. Prospects for assimilation of a credible study are dim because there are too many individual opinions.



GRANT S. GREEN JR.
LTC, IN



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

ATCG-ATS

22 February 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with GEN Andrew P. O'Meara, USA, Ret., 23 January 1978

General O'Meara made the following points during his discussion with the study group:

1. Individual versus unit replacements.

a. There is a personnel management philosophy held by some civilian managers, cost analysts, and ADP programmers that soldiers can be treated like spare parts in a supply system. As a result, the system of individual training which the Army has developed does not recognize the realities of battle. Men do not fight as individuals; rather they fight as units and teams. They should be trained that way in peacetime.

b. Although the individual training program during Vietnam was excellent, units were not proficient due to the continuous churning of personnel rotations. The most experienced NCO's left every month, and the leader who could produce a highly trained unit in the face of these obstacles had to be a genius.

c. Should tactical nuclear weapons ever be employed, it is nonsense to think that units decimated by nuclear attack could be made effective with individual replacements. Instead, units receiving high casualties must be replaced by newly trained units, and effective personnel left in the decimated units would be used as individual replacements.

d. The solution to the challenge at hand lies in the use of a unit replacement personnel system.

e. Initially, unit replacements should be attempted only at company level. After a company cadre of officers and NCO's is established, it could be filled with personnel from the reception center. After 30 days

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22 February 1978

SUBJECT: Conference with GEN Andrew P. O'Meara, USA, Ret., 23 January 1978

of company training (not replacement training), the unit would be sent overseas and kept intact for 18 months. At that time, personnel would be reassigned to fill units and individual losses elsewhere.

f. With unit replacements, the combat capability of battalions (new company received every six months) would continually be much higher than when unit integrity and training are constantly being degraded by the siphoning off of officers, NCO's, and specialists with the longest service. In peace or war, unit identity and high morale and proficiency can be attained with unit replacements which would act as a bastion against drugs and disciplinary problems.

g. Unit replacement, if not unit rotation, is definitely required in time of war. In time of peace, unit replacement is an operational and training requirement. For the training of personnel managers, it is an absolute necessity.

2. The main reason Gyroscope did not work well was that it tended to be more of a carrier to move men from various units back to CONUS without regard to branch assignment. Prior to rotation back to the States, officers and NCO's with time left to serve in Europe were moved to other units. The result was that companies would be manned by personnel who had neither the training, motivation, or supervision to maintain their equipment. Discipline and morale were also adversely affected.

3. The two primary elements of a successful training program are stabilized personnel assignments and rigorous performance testing throughout.

4. Performance Testing:

a. Objective testing (not evaluation) is necessary to ensure an effective training program. Tests should be developed on the basis which soldiers can readily understand, and, like combat, which are highly competitive.

b. An elite group should be organized for administration of tests and to ensure objectivity and uniformity.

c. An objective test is needed to check training standards across the Army. This is especially important in light of the problems inherent in the current readiness reporting system.

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SUBJECT: Conference with GEN Andrew P. O'Meara, USA, Ret., 23 January 1978

5. The Army cannot afford the high cost of individual training centers. BCT and basic skills should be taught in the field. Highly technical skills probably would be taught best in the schools.

6. Although the ability of a command group is important to combat effectiveness, as much as 90 percent of a unit's performance in combat is dependent on the fighting ability of platoons. For that reason, training should focus on the platoon rather than the battalion.

7. Training at platoon level is particularly important for the Reserve Components (RC). Also, tests of training standards for the RC should be the same as used for Active Components in order to develop the proper degree of experience. BCT and AIT for reservists should be continued in the active base, if only to keep the RC units from reverting to the old National Guard practice, prevalent in the 1920's and 1930's, of spending the entire training year on little but basic training of the soldier.



DAVID A. MUFNAGEL
COL, AD
Deputy Director

1 Incl
Individual and Unit
Rotation Versus Unit
Replacement

Section II

INDIVIDUAL AND UNIT ROTATION vs UNIT REPLACEMENT

The Army has an unfortunate fixation on rotation of personnel to and from overseas service. Because the desire to spread the load of soldiering in combat led, during the Korean War, to the rotation of individuals, with its constant erosion, sometimes crippling, of our units' capabilities, we turned to Gyroscope. As I have said, Gyroscope, the rotation of divisions between the US and Germany, worked to the advantage of the 4th Armored Division. However, expense and the personnel managers killed it. Well before a unit was due to gyroscope to the States the personnel managers ordered all officers and men with some time left to serve in Europe to other units. The Gyroscope unit became a carrier to move men from many units back to the States, without regard to branch assignment. For a period of weeks, sometimes many weeks, a tank company would be manned with men who had neither the training, the motivation, nor the supervision to maintain their expensive and frequently sensitive equipment. The effect on equipment was disastrous. The effect on discipline and morale was almost as bad.

Since the termination of Gyroscope, various unit rotation systems from the battalion to the brigade have been tried. None have worked well, to my knowledge. Nonetheless, we continue to try, impelled by the damage done by individual rotation to fine units committed to Vietnam and by the self-evident fact that on a nuclear battlefield we must have unit replacement.

In that last word lies the solution to our dilemma. We need unit replacement. We don't need unit rotation. We will never achieve successful unit replacement in war unless we revolutionize the thinking of our personnel managers and have them and their computers grapple with the problems of unit replacement in time of peace.

At first, it should not be attempted except at company level. Set up a cadre of officers and key non-coms for a company. Fill it up with men from the reception center. Let the captain and his cadre train the company for thirty days. No replacement center training, though the site of the company for 30 days might be at a replacement training center. Then ship the company to a battalion overseas and hold it and its personnel intact for 18 months. At the end of that time, reassign the personnel to fill up headquarters and service units and to fill individual losses elsewhere. Bring in a new company from the States to replace the one just broken up. An infantry battalion, tank battalion, or artillery battalion with three line companies or batteries would receive a new company every six months. Some will complain, "This will lower the combat readiness of our battalions." Not so. The combat capability of the battalion will continually be higher, generally much higher, than when you are constantly

destroying unit integrity and impairing unit training by siphoning off from each unit the officers and men with the longest service in the unit. Furthermore, the new companies will give senior commanders the type of experience they need if they are ever to commit unseasoned troops to combat.

After some years experience with company replacement, our personnel managers may well come up with improvements to make battalion replacement feasible in peacetime. This is desirable because the battalion is the smallest unit which should be replaced on the nuclear battlefield. But let's not start with battalions. We have a whole generation of computers and their bosses to retrain. Even if we never achieve battalion replacement until war breaks out, we will have established the philosophy and the system of unit replacement, and we will have our personnel managers oriented to fight a winning war: a big change, when for twenty-six years they have been working towards losing wars.

One tangible but great dividend of the unit replacement outlined above is that the initial admiration and loyalty which the recruit feels to his first drill sergeant and first company commander is converted to unit loyalty, loyalty to a unit in which he knows, and knows well, every officer, NCO and soldier. This is what makes teams, fighting units, instead of agglomerations of MOSSs.

Unit replacement gives way to rotation in a war of less than total national mobilization such as Korea or Vietnam. There we need rotation out of the war theatre. The peacetime system I advocate converts to it to perfection....



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

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15 February 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with GEN Bruce Palmer, Jr., USA, Ret., 25 January 1978

General Palmer made the following points during his discussion with the study group:

1. Reserve Components (RC).

a. The Reserve Components are an important element of the Total Force, and the Active Army should consider providing a greater support role for their training. We cannot slow our pace of support to the RC, and it is important for the study to address this challenge.

b. It would not be practical for the AC and RC to maintain the same readiness levels. The Active Force is having enough challenges maintaining its readiness levels. You can't manufacture time for the Reserve Components. The USAF is basically able to match active and reserve readiness levels but they devote more resources to the Air NG than we do to the RC with the result that they have higher RC readiness levels but a less cost-effective reserve force than does the Army.

c. RC peacetime training should focus on company level training activities since a good battalion can be put together from good companies. BCT and AIT for the RC should continue to be conducted in the Active training base.

d. The ability to mobilize is an act of deterrence in itself. For example, some feel that the partial mobilization we had during the Korean War probably prevented World War III. Both the Army National Guard and Army Reserve played an important role in this effort. We definitely need to be able to fight more than a short war.

e. The importance of the RC can be seen from another perspective. The ability to adequately support the present AC force structure can probably be challenged. For example, is there sufficient air mobility for

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SUBJECT: Conference with GEN Brue Palmer, Jr., USA, Ret., 25 January 1978

ground forces? POMCUS issues must be considered too. Continued cuts to the training base also take time from unit training. Any increase in heavy divisions would require even greater support. What is the optimum force structure to maintain divisions in a high state of readiness? Should we go with a fewer number of divisions to ensure their proper support? Should some of our Active divisions be Training Divisions? All of this places greater reliance on the Reserve Components since they in effect complement the Active Force.

f. We should not forget that even if the RC are understrength, we are in effect training a cadre which would be a nucleus in wartime upon which to build, train, and deploy. Our peacetime force structure should recognize this.

2. Contingencies:

a. Army force structure is driven by the possibility of a NATO war--our largest requirement but the least likely to occur. On the other hand, contingencies in Panama and the Middle East, or events involving international terrorism are more likely to occur.

b. The Army has generally kept a good balance between heavy (Armor) and light (Infantry) capabilities since World War II. It is probably easier for mechanized to fight light than vice versa, but there are other factors which should be considered. These include the important and challenging role of an Infantry squad leader who personally must lead and motivate every man on the battlefield for whom he is responsible. This is no easy task. The other combat arms tend as a whole to be more technical in their approach to training.

3. Human factors. The Navy and Air Force see people as limiting factors in the maintenance of crews and pilots respectively rather than more pay or better facilities, etc. Young men don't want to be separated from their families. Compared to the other Services, the Army is seen as a young Service of junior enlisted men involving fewer dependents and family separations. Thus, it would seem easier to motivate Army personnel, for example, than the older technicians of the other Services.

4. Unit versus individual replacements.

a. In a stable situation, small unit replacement (no higher than platoon) would probably work. However, there have been several examples where peacetime unit rotation did not work. Gyroscope was ineffective and Brigade 75 severely taxed Fort Hood.

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b. The Marines use the unit replacement system, and it takes three units to maintain one overseas (one overseas, one returning, and one ready to go). In other words, it takes a division to support one brigade.

c. In combat, our doctrine is to fight with units until they become ineffective at which time they are removed from front lines, filled with individual replacements, trained and used again. In this manner, integrity of unit designation is retained whereas the Soviets, for example, replace decimated units with other units.

d. Any replacement system should consider the role of the Reserve Components; that is, at what levels they will be trained and deployed.

e. It would be difficult for NATO to field fighting units and simultaneously train recruits as individual replacements. We did this prior to World War II, but we had benefit of an experienced NCO Corps, and there were waiting lines to join the Army.

5. Training.

a. Training is our most important peacetime mission, but many leaders don't practice what they preach. For one thing, it is very difficult to train a unit from scratch and get it ready for combat. Second, we need to get the top leaders involved in training because it is they that must set the tone. Finally, training must be made to be interesting to the individual soldier.

b. You don't have to be a born trainer to be a good trainer. Most of the important elements can be taught. Junior Officers and NCOs in particular need to realize their own capabilities and gain confidence as they gradually increase their ability to lead. Training principles haven't changed but people and materials have. Remember that the most successful leaders in combat were those that did the unexpected. There are no stereotyped solutions to good battlefield tactics. In this regard, care should be taken to ensure that the ARTEP does not lead to stereotype training.

c. Generally, units below authorized strength can still conduct meaningful training (sandtables, etc). Units should conduct field training as much as possible.

d. In larger unit training exercises, care should be taken to ensure that the training time of small units is utilized effectively. Large unit exercises are especially important to determine combat service support capabilities. While large unit training exercises are important, the focus of training should be on the squad and platoon.

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e. Discipline is important to a good training program and the ability to execute training proficiency into combat effectiveness. A sharp looking unit is not the sole indicator of discipline.

f. Training is becoming more important with the greatly improved combat capabilities of the Soviet Union and Third Nations. Our proficiency must approach 100 percent if we are to win, and how well the individual is trained to do his job is the key to that success.

6. Training inspections.

a. General Howze had a good system. He would randomly pick one rifle company out of the division and have it meet him at a certain time and location with its tactical equipment. He would then put the unit through certain tasks such as live fire exercises to determine its endurance and fighting ability. He had everyone's attention on training. Tactical training inspections should be conducted by higher level commanders (about two levels higher).

b. The unit readiness report was originally designed to obtain honest evaluations, but things got off track and it became a management tool for personnel and equipment levels instead. Commanders began to peak their units and the intent of the report was compromised. The Army needs to restore objectivity and integrity to its readiness reporting and this is a very difficult issue to resolve.

c. Physical conditioning is an important element of training readiness.

d. We definitely need an inspection system for training. Equally important, we need to be able to say that we cannot achieve certain requirements when we clearly cannot do it.

7. Minimum level of training. The Air Force can show the minimum fuel needed to maintain pilot proficiency. If their training resources are cut, they can show that proficiency drops, and it will cost more to re-train back to the needed proficiency. The 82d Airborne Division probably has a similar program which requires that so many jumps per time interval are necessary to maintain proficiency. We need to have a similar system for all training programs in order to determine the cost-effective breakpoint.

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8. SQT. Be careful in implementing the SQT since the score that a NCO receives is not the sole measure of his leadership on the battlefield. Don't put all your chips on the SQT.



DAVID A. MUFNAGEL
COL, AD
Deputy Director

MEMORANDUM FOR RECORD

PAEO
COL Miller/4406
9 May 1978

SUBJECT: GEN Kroesen's Visit to Army Training Study (ARTS) Group,
24 February 1978

1. On 24 Feb 78 GEN Kroesen met with members of the ARTS Group at Ft Belvoir, VA. The purpose of the meeting was to solicit GEN Kroesen's views on training problems facing the Army. The meeting was chaired by BG Fredric Brown, ARTS Director.
2. GEN Kroesen made the following points:
 - a. Training programs must be based upon battalion level proficiency for both AC and RC. Much battalion training can be done using CAMS and CATTS; however, training must culminate in an exercise. CAMS/CATTS are not yet far enough along to be used as a PASS/FAIL test; give them time.
 - b. First priority is to train leaders.
 - c. Training establishment must do best job possible to furnish units with qualified individual soldiers. It must, as a minimum, produce a soldier who can go into combat the day following graduation, i.e., be deployed immediately as a combat replacement. Units must sustain individual qualifications, adding to the basic soldier the more advanced skills and training practice which produce an expert in his MOS.
 - d. It is not possible to take the commander's subjective judgement out of the measurement of training effectiveness. We must layout basic tasks that the unit is expected to be able to perform ("playbook"). Annual requirements (EDRE, IG, TPI, FTX, MOBA, etc.) form the basis for the commander to evaluate training readiness.
 - e. Training proficiency is time sensitive. Six months after a TPI a unit is probably no longer fully capable because of personnel turbulence. Nevertheless, the system certifies the unit for a year.
 - f. Leader stability is more important than follower stability. Followers should be able to be accepted on short notice.
 - g. Unit rotation is too idealistic for the US Army. PACT countries expend units, then replace them. We expect units to be maintained. Our system is better because it provides for unit continuity. Individual replacement for the US Army is better than unit replacement.
 - h. The remembering curve is very steep when the individual is under fire.

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9 May 1978

SUBJECT: GEN Kroesen's Visit to Army Training Study (ARTS) Group,
24 February 1978

i. The SQT is important. It will force our NCOs to learn to train. We have only begun on the SQT and it will take some time for results to be achieved. We don't yet understand the meaning of SQT results. For example, why are the SQT scores for 172d and 193d Brigades higher than for other units?

j. The ARTEP system must be given time to mature. Don't mathematically link ARTEP and URR. A nuclear proficiency test should be part of ARTEP; administered by battalion commander, not IG. PASS/FAIL tests are not appropriate for AC units; however, they are necessary for individuals and RC units.

k. The need for formal, independently administered, training tests (EDRE, TACEVAL, etc.) for a unit is a function of the unit's mission. A quick reaction mission may imply a requirement for a formal check of a unit's capability. That requirement, however, should not be extrapolated arbitrarily to all units. Funds necessary to do formal tests must be justified using normal resource management procedures. These funds are one requirement to maintain a unit at a specified level of readiness.

l. Mobilization must entail a minimum of turbulence. To the extent possible, peacetime and wartime missions for RC units must be aligned.

m. RGs should train the trainers; however, they must also help plan for and conduct training.

n. The Army has not yet learned how to bring units to a training peak and keep them there. For the RC, we haven't even found the level to which we can expect a unit to be brought. That's a job for ARTS.

o. AC and RC units must be measured on the same readiness scale; however, the readiness requirement or goal should be based on the deployment requirement.

p. Before RC units deploy, they must demonstrate a capability to perform their mission, i.e., pass a training evaluation.

q. There is a limited capability for realistically increasing the training objectives of early deploying RC units. The controlling factor is the limited number of training days. Other resources, however, can be given to early-deploying units on a priority basis.

r. Training programs should consist of four elements:

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- (1) Leader training.
- (2) Individual (sustaining) training.
- (3) Crew (small unit) training.
- (4) Collective training.

s. FORSCOM has run out of training time for AC units. This is a result of the necessity to borrow military manpower to perform housekeeping functions. FORSCOM is seriously short of civilian personnel and GSF military personnel.

t. There is a need to identify basic ("playbook") tasks that units must be able to perform. Maybe FORSCOM ought to be doing this now. These basic tasks should be based on the mission of the unit, not necessarily extended to all units of a certain type. For example, units going to Europe don't need desert training.

u. One way to enunciate the readiness degradation resulting from a failure to perform certain training events is to adjust deployment capability. For example, failure to do an EDRE might imply that a unit will be delayed ten or more days in meeting its RDD for deployment.

v. Shortages of equipment force training by shifts. This is undesirable because the total unit can't train and maintenance will suffer.

w. FORSCOM DCG given primary mission to address our capability for sustained land combat.

x. For divisional units, there should be a division level exercise every two years and brigade level exercises every year. There is not enough training time to increase this schedule of exercises.

y. Europe should go to eight-man tank crews, now.

z. The National Training Center should be justified based on the football analogy that the Washington Redskins need to play pre-season games.

aa. The commander's evaluation of unit readiness should be the basis of any formal readiness report. The status of resources (personnel, equipment) should be incidentally reported and should not be the driving factor.

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ab. Personnel attrition can be expected to increase as more complicated equipment is introduced. Analogously, all applicants don't stay with the Chicago Bears.



MILLER



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

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17 March 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with General George S. Blanchard, CincUSAREUR/Seventh Army, 28 February 1978

General Blanchard made the following points during his discussion with the study group:

1. The ARTS briefing talks of US Forces conceivably being outnumbered in personnel and weapons by an enemy who enjoys technological parity. But an advantage the US has over the Russians is NCOs, since most Soviet sergeants are first-term draftees. This advantage should be exploited.
2. As the study effort progresses, look into and consider:
 - a. The time it takes to "climatize" a soldier who is newly assigned to Europe. However, training is improving in this regard--many more soldiers in CONUS divisions now know what NATO is all about, and I am encouraged by this progress.
 - b. The "Brigade Learning Centers" which three of the CONUS divisions have established. These centers have MOS libraries, audiovisual devices, etc. for soldiers to use for training. There is no TOE or MTOE for these centers; they have developed rather spontaneously.
 - c. The difference between CONUS and USAREUR divisions. In Europe, units go to Grafenwohr or Hohenfels to become tactical. There are differences between training programs for a brigade which has a close-in training area and one which does not. This impacts on day-to-day training, the use of weapons systems, simulators, subcaliber training devices, etc.
3. There is generally sufficient time for training since troops are often looking for something to do. The approach to take is to:

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a. Get company commanders to trust their NCOs--trust them to train. The commander cannot personally do all of the work; commanders are working 14 hours a day, but they could get their day down to 10 hours if they gave NCOs more responsibility.

b. Let people have freedom to make mistakes. To do otherwise prevents progress.

c. Watch the time that is available for training, and ensure it is spent on training. Often a soldier's time tends to be spent disproportionately on activities such as race relations, equal opportunity, or drug education programs because the effects of these efforts can perhaps be measured more objectively than can the effects of training.

4. More needs to be done with subcaliber training devices in order to maximize time in major training areas and to maintain proficiency between visits to these training areas.

5. The problem with a "package" replacement concept is that so many things can happen to the group from the time it is formed in the training base until it actually gets on the ground. Unit replacements may not be a good answer, though some lesser variation might be worthy of study. Follow the ADA technician package and the 5-man tank crew to see what can be learned. The 5-man tank crew study probably will not be available until next summer. Look at the IHAWK unit replacement proposal--USAREUR cannot accept a personnel grade structure at two levels below authorized (i.e., receiving E-3s instead of E-5s). Also, research General Abrams' project of transferring Armor soldiers by crews--the project was not successful. Finally, a policy such as Brigade 75 has some negative effects on the losing end. Look at the 2d Armored Division and determine what Brigade 75 did to it and to Fort Hood. Both ends should be considered. The study group may also want to examine the replacement system used by the German Army.

6. USAREUR is looking for an unmarried soldier to serve an 18 month tour (will accept a 24 month tour). Although this policy will cause turbulence to go up somewhat, it needs to be examined because troop attitude and morale are more of a major problem than turbulence among the lower ranks. The key is stability of leaders. In Europe, NCOs generally stay with their unit of assignment for three years. If 100 percent of the unit rotated, institutional memory would be lost--particularly detailed knowledge of the terrain. Unit rotation or replacement is not the way to go.

7. The solution for being able to get more than 50 percent of the unit together for training is the ABC model. But how much training management

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should be directed from DA, and how much should be left to the field commander? USAREUR/TRADOC/FORSCOM are looking into establishing a two-week course on training for commanders. What is needed is a way to have standardization of training without eliminating decentralized training, without taking away the prerogatives of the commander, and without destroying initiative.

8. The grade reading level for SQTs must be reduced and as quickly as possible. The amount of hands-on SQT testing should vary by MOS, but the predominance of tasks for combat arms should be in the hands-on mode. USAREUR would like to have some input on the tasks chosen from the SM to be tested each year. Since proficiency throughout the Army improves almost immediately when the 60-day notice goes out, this is a major decision for the Army--perhaps one of its most important ones. TRADOC should go faster in producing SM/SQT materials.

9. Training challenges within USAREUR:

a. Individual. Maintaining recruit skills learned in the training center and adding those individual skills necessary for effective crew proficiency.


b. Collective. Combining skills into a team effort which enables the crew to do well in ARTEP.

10. The problems of interoperability with our allies lie within all units, not just the combat service support units. CSS units need to be especially effective in the areas of rations, POL, and ammunition. There are interoperability exercises in Europe, but no common data bank is available. This is needed.

11. Frustrations come because one cannot prove that the resources requested for training are in fact needed to maintain proficiency. The effects of changes in resources on training proficiency/combat effectiveness still cannot be quantified.

12. The soldier currently received from the training base needs additional training in USAREUR before he meets combat standards.

13. This study is very important for the future of the Army. Do not be pushed by time.


H. B. QUEKEMEYER
Major, AG
Executive Officer



DEPARTMENT OF THE ARMY
HEADQUARTERS US ARMY TRAINING STUDY
FORT BELVOIR, VIRGINIA 22060

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17 April 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference With Gen William E. DePuy, USA, Ret., 13 March 1978

General DePuy made the following points during his discussion with the study group:

1. SCOPES, REALTRAIN, and MILES have done much to increase the realism of training, but we still do not have a procedure to quantify unit performance as the product of training. As more insights are developed from hard data gained from instrumented engagement simulation at the National Training Center, the quantification of unit performance will become a reality for maneuver units. Quantification of some combat service support functions can be done now through ARTEP work standards.
2. In determining an optimum training program, one procedure would be to develop several experimental training packages, each with different combinations of ammunition, simulators, exercises, etc. Then through trial and error, and based on each set of training processes and evaluation of performance differences, select the program which produces the best performance within tolerable and reasonable costs. This would also assist in the justification of resources for training to DA, OSD, and OMB since one could now show a direct relationship between battle outcome and alternative training programs by using quantified unit performance data in accepted battle simulation models. A major contribution from ARTS would be to push hard for this capability.
3. There are four major elements related to battlefield performance:
 - a. Individual participation in battle. In WW II only about 25 percent of Infantry soldiers fired their weapons. Korea was near 50 percent. Surely this remains a major problem. Perhaps more emphasis on organizational effectiveness is needed although the solution to this challenge is not clear.
 - b. Proficiency of gunners and crews. Both well-trained individuals and crews are important in this category.
 - c. Tactics of junior leaders. The focus here is at battalion level and below as it relates to the battlefield deployment of troops. Engagement simulation will provide an enormous increase in tactical training effectiveness.

d. Battle management. This element involves the synchronization of intelligence, air and ground fire support, electronic warfare, maneuver, and combat service support. For example, battalion or brigade staffs participating in an ARTEP are learning the principles of battle management. The high cost of maneuver elements forces increased reliance on computer assisted staff and command training simulations.

e. With this breakout of battlefield performance, one can clearly relate the role of individuals, weapons, teams or crews, and engagement simulations to proficiency. Otherwise, unless one is careful, tactics and battle management tend to be ill-defined.

4. The chain-of-command must manage individual training in units. From a technical standpoint, the key to this requirement rests with a good evaluation program since it should furnish answers in regard to individual motivation, simulators, training programs, range exercises, etc. Training developers must become involved with tests and evaluations to know what elements produce the best training results. It is an iterative process.

5. Tactically speaking, the ARTEP needs to be given a chance to survive and not be used at this time to grade training. Strategically speaking, the Army's desire to have a more objective measure of training readiness will probably lead eventually to use of quantified ARTEPs. However, that should not occur until after hard data is available from controlled range engagement simulations. Until we get the confidence from that data, training readiness will still be largely judgmental.

6. Although performance can be quantified at squad level (i.e., number of targets hit), it is difficult to be quantified at company and battalion levels. For example, how do you quantify the ability of a platoon leader to have his five tanks at the right place and at the right time? Is it worth the effort to evaluate this level of performance when it is so imprecise? It would probably be better to get more hard data on this topic, but there may not be sufficient time before the study report is due. EDREs and TAC EVALs may offer insights, but it is safe to stay with the diagnostic approach until more hard data is available.

7. Training management challenges in the institution are complex and tough to solve. At one time, training seemed too theoretical with insufficient specifics on actual tasks to be performed. Then the pendulum swung too far the other way and training became primarily oriented on learning tasks for specific jobs or problems to be solved. The major drawbacks with this approach were that students either went to different jobs than those for which they were trained or they could not work effectively at higher levels of supervision. The process is difficult because it involves personnel assignments and NCO career progression. There is no

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SUBJECT: Conference with Gen William E. Depuy, USA, Ret., 13 March 1978

single answer to the problem except continual evaluation and analysis as an input to better training programs. The impact on force effectiveness is immense.

8. The Army is justly proud of its units, but sometimes we seem blinded on the effectiveness of our forces in that there is far more emphasis on the man than on the weapon system. The Air Force training program is probably just the opposite with more orientation on weapons systems. We need the proper amalgam of both--capable weapons systems and trained operators.

9. The focus of Reserve Component peacetime training should likely not go beyond company level with emphasis on individual and team or crew proficiency. It is important that the RC be able to provide qualified individual replacements in war, especially where there is a short lead time involved and where only a few logistical units may be at the necessary readiness level for deployment. For long lead times, more emphasis could be placed on the utilization of RC unit replacements.

10. Individual training should be decentralized to the maximum extent possible consistent with the ability of the personnel system to support multiechelon training and the capability of our NCOs as trainers. MILES should help in this area.

11. The ARTEP is broad and is not definitive. It should include all the critical tasks for training and be managed at whatever level decisions are made with respect to resources. It is a valid concept to train only on these tasks for which training is needed, and we have an intelligent Officer Corps which can cope with this degree of sophistication. The limited training experience of the RC presents a different problem and solution.

12. The role of TRADOC addresses combat developments, training developments, training, and evaluation, and it would be difficult now to move TRADOC much beyond those responsibilities. The concept of decentralized training is valid, i.e., pick the commander, give him the mission and the tools, and let him adapt to the real world conditions as only he can do. Even during mobilization there would be reluctance in expanding the role of TRADOC such as, for example, becoming an Army IG for the evaluation of training readiness. As we discussed earlier, wait until data is available from engagement simulations on instrumented ranges and we have a better, more objective grasp of force combat effectiveness, and can react from feedback data. Then it may be appropriate for TRADOC to assume an Army training evaluation role. It would be a serious mistake to add this responsibility to TRADOC now since practically everything we have is judgmental, and no one knows what the proper standards are for the evaluation

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of training. TRADOC should establish SQT and ARTEP standards (quantifying them whenever practical) and provide training materials and procedures which are designed to help individuals and units to attain those standards. However, USAREUR and FORSCOM, who best know resource limitations and opportunities, should be charged with putting together the actual training programs and evaluating their effectiveness within the force. TRADOC must evaluate the effectiveness of training support materials.



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24 March 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with MG Henry Mohr, Chief of Army Reserve, 20 March 1978

General Mohr made the following points during his discussion with the study group:

1. Active personnel who deal with Reserve Component (RC) training need to realize that training, personnel, and administrative matters for the RC are noticeably different from those of Active Components (AC). It may be that a specialized AC career management field is needed for those who work extensively on RC matters.
2. Based upon 15 to 20 years of experience, 48 drill periods represent the optimum amount of training when one considers both military and civilian requirements. In this regard, the USAR should have a similar congressional (legal) protection for this amount of training as does the Army National Guard.
3. Better advantage needs to be taken of the assets offered by USAR Schools and Training Divisions. For example, a split training option might be considered which could eliminate the need for 12 consecutive weeks of BCT/AIT in the AC training base. BCT should continue to be conducted in AC training centers, but some AIT could probably be taught in units with assistance by USAR Schools and Training Divisions.
4. Some people feel that to have a change automatically means progress. This is definitely not the case because we have made too many doctrinal, policy, and organizational changes before the impact of these changes was known. This in turn drives turbulence which affects training and proficiency. The solution is to validate proposed changes before they are implemented.
5. The evaluation of training is our toughest challenge. For example, there are problems with the SQT which need to be addressed and which should be considered when evaluating corresponding RC programs.

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SUBJECT: Conference with MG Mohr, Chief of Army Reserve, 20 March 1978

- a. Some AC units are standing down unit training programs for relatively long periods in order to prepare for the SQT.
 - b. The high SQT failure rate for some MOSs is probably equivalent to a C4 unit readiness posture.
 - c. The potential focus on the SQT as a personnel management tool is not good because it is diverting our attention from unit training and, if not properly orchestrated in its implementation, threatens to generate an AIT image of the Army.
 - d. The SQT went from 80 percent hands-on and 20 percent written tests to 20 percent hands-on and 80 percent written. It has now become too analytical and complex, and too difficult to understand by those of low reading comprehension even though these people could do their job well in combat.
 - e. The availability of equipment, time, training facilities, widely scattered units, and preparations for training and testing all present difficult challenges for the RC.
6. There is a dilemma in our emphasis for high quality people in that these personnel generally have high turnover rates. However, there is presently enough leadership material in the Reserve Components; what is needed are lower aptitude personnel who are necessary for the actual fighting of the war. We need to attract people representing all categories of aptitude, not just those who want to be leaders--followers are important too. This policy is prevalent in war; why not use it for peacetime training.
 7. The management of the Army should be geared on a wartime rather than a peacetime management basis. As a result, we are not as ready today to fight a war as we should be because we do not think in terms of a transition to war.
 8. NCOs are not being used properly. If both responsibility and authority were returned to the NCO Corps, training would improve considerably.
 9. There is a considerable cellular structure in the Army which involves some 600 separate detachments and small units with no gaining command or higher headquarters to tie together the many aspects of training and training management. Who will do this in time of war?
 10. In measuring training readiness, criteria should be with respect to actual equipment and people on hand or assigned respectively rather than compared to full TOE or authorized. (Each Service has a different system

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for reporting readiness, but they need to follow uniform procedures). In reporting training readiness, capabilities as well as problems should be reflected. The Army tends to focus too much on the latter.

11. During past mobilizations, we have had to improvise. In the two most recent mobilizations, units having the highest readiness status were not the first to be mobilized. The reason was that the most ready units were "saved" to be deployed quickly, if needed.

12. A major problem in early World War II was the lack of trained staffs for senior (Division, Corps, etc.) headquarters. In a future conflict, we may find ourselves again in the position of having tactical units with equipment on hand before trained staffs are available. Care should be taken not to overfocus on D to D+30 units, but to prepare for a longer war. The ability to sustain and reinforce may be critical.

13. Look at training and its relation to the personnel management system. The latter causes rapid personnel changes and turbulence and is not matched to the training system or introduction of new weapons. This is especially important for the Reserve Components who need sufficient time to acquire critical skills.

14. The Army Reserve needs a better senior officer development program which identifies bright potential General Officers early, at the major or lieutenant colonel level, so they are prepared to deal with issues at the appropriate point in time.

15. The educational system of the Army is not yet adequately organized to deal with the RC. Its focus is oriented too heavily on AC matters; however, progress has been made.

16. In designing training programs, consideration should be given to the importance of manual back-up programs to augment computer systems. This is particularly important for personnel, finance, and supply ADP programs as well as for certain computer-supported weapons systems which may not work as planned in time of war.

17. One of the most effective RC training programs for wartime mission training is the gaining command program in which units train overseas or in CONUS with the actual units with which they would operate in time of war. Hopefully, this program will be extended to include all elements of the force, especially the small cellular units discussed earlier.

18. OSD has for some time been trying to get the peacetime Steadfast system organized around a wartime structure. For example, CONUSAs could be organized as tactical Corps and GOCOMs/ARCOMs could be trained as division

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cadres or other wartime required HQs. This will very likely affect the manner in which Readiness Regions are eventually reorganized.

19. There is a major congressional effort to place RC benefits into the FY 80 budget, and to restore some incentives in the FY 79 budget. Look for increased OSD initiatives in this area also, particularly in regard to the need for a training readiness NCO who would manage training at company level. The Army Reserve stands the lowest among the Services in terms of the number of full-time manning personnel. These people should not come from the AC force except for the valuable augmentees since its strength is probably at minimum acceptable levels now to maintain combat effectiveness.

20. The RC force is in a better equipment posture than ever before. In terms of the percentage of the nonmajor unit force which meets ALO requirements, RC and AC standards of achievement in CONUS are not too different.

21. One problem in determining the readiness of RC units is that there is no uniform evaluation standard for the CONUSAs and Readiness Regions although FORSCOM is working to correct this. There is also no uniform manner in which readiness ratings are adjusted as they move upward in the chain-of-command.

22. More latitude is needed in the authorized number of additional training assemblies (ATAs), since this resource could be better used if commanders had more flexibility.

23. TRADOC needs to be more actively involved in the development of training programs that will work in the RC environment. However, progress has been made and devices developed by TRADOC are assisting USAR units.

24. In developing RC programs, bring in RC experts, particularly those who are specialists in their area. This has not been pushed hard enough in the field of training.

25. A focus which would train the RC at individual levels only is wrong. Instead, the training should focus on units which in many cases, given adequate full-time training management personnel, can offer more combat experience and higher readiness indicators than active units. As an example, 80 percent of RC accessions last year were prior service personnel.

26. The manner in which TOEs are constructed, with little career progression potential, presents a special problem for the RC force due to geographical conditions and other factors unique to the Reserve.

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27. The IRR as it is today is an obsolete system. We are treating it like we were trying to whip a dead horse to life. One serious drawback is that the IRR does not match the skills needed in mobilization. A 24 drill status and annual training, similar to the Air Force program for their IRR, may be the solution to the problem. It is important that IRR personnel do not have an image that they would be used as cannon fodder. Our planning should be driven by the utilization of these personnel as a reliable source of replacements for late-deploying RC and AC units rather than for individual or crew replacements.



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31 May 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with LTG Arthur S. Collins, Jr., USA, Ret.,
22 March 1978.

General Collins made the following points during his discussion with the study group:

1. In order to have a good product from the study, every active participant should be deeply familiar with training. The best way to develop good training programs is for the Army as a whole, officers and NCOs, to get genuinely interested in training and to develop its training managers to work closely with troops (personnel, weapons, equipment, etc.), know the fundamental elements of good training, and be able to impart this information during visits to unit training areas. Teaching proper training techniques is far preferable to relieving commanders whose units have exhibited unsatisfactory training. Most commanders are capable and desire to have good training, but they need to spend more time on training fundamentals rather than on special projects which detract from their mission.
2. There are other reasons why more time needs to be spent on training. First, the top priority for officer assignments should be troop duty rather than specialized degrees, etc. Also, Operational Readiness Reports, CMMIs, AGIs, and other inspections are detracting from training time since leaders are generally criticized for a poor showing in these areas and, thus, are spending a disproportionate amount of their time to maintain required standards because of the high visibility given to these areas. But training also needs visibility. Senior officers, in particular field commanders, need to visit units to see what their training problems are. Training is demanding, but under a training program one develops a strong sense of pride or accomplishment which nourishes professional judgment and helps improve training proficiency. General Howze was an outstanding trainer. He frequently spent 2 or 3 days in the field with each of his battalions.
3. Good training cannot be quantified. The ground battle in particular is too complicated to quantify since it depends on morale, leadership,

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SUBJECT: Conference with LTG Arthur S. Collins, Jr., USA, Ret.,
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esprit, etc. However, training can be evaluated and determinations made if certain programs are feasible. The first important step is to find out what percentage of unit personnel are qualified at ARTEP, SQT, range firings, tank gunnery, etc. Second, the focus of training should be at the battalion level and below since well trained battalions will produce winners on the battlefield. Likewise, training resources should be geared for lower or basic level training, which together with the use of simulators and training devices, can provide for a cost-effective training program. Higher level exercises are important but require considerably more resources. Sometimes too much stress is placed on FTXs at the expense of individual training in units. In this regard, more advantage should be taken of CPX training. The next step is especially difficult and must aim at the blending of combined arms training. Finally, some training can be quantified like the number of artillery rounds required for registration or the number of gunnery programs required annually. However, the state of training should not be the basis for determining weapons system requirements. Commanders should be given at least 90 percent of the materials needed to accomplish their mission. Then they should be allowed to develop those training programs best suited for their particular requirements.

4. Garrison training days need to be considered in the development of training resources since these days are just as important for their impact on training as are battalion field training days. This is particularly true for the training of individuals in units. Garrison training days can also be used in a scarce resource environment to buy some less costly training.

5. A good training program should place units in a field tactical environment whenever practical, particularly while at a major training area.

6. Training centers do a good job in training individual soldiers.

7. Leaders must recognize that not every unit can be at a high state of readiness. As a result, more attention should be placed on developing good training than on the present focus of primary concern for scores received in a URR or AGI. This is not to say that training programs cannot be tested, but the Army needs to get away from the atmosphere of comparing scores. Otherwise, the scores tend to become an end in themselves.

8. The Army tends to be weak in tactical doctrine, i.e., the use of weapons and forces to obtain the best battlefield kill ratios. We should be asking questions as to what is the best way tactically to use the

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weapons we have. New weapons and programming are important, but we tend to procrastinate too long on developing hardware. On the other hand, training can be developed much more quickly to meet the threat. The US also tends to build complexity into its weapons systems whereas the Soviets generally improve their weapons through product improvement. This makes training easier, and as systems get more complex, soldiers adjust to each new model. Overall, there is a lack of professional dialogue on the advantages of improving tactics as opposed to obtaining newer weapons. The Germans historically have had a superb training/tactics interface that has allowed an excellent capability for transition from peace to war. TRADOC should take the lead in putting training in doctrine and tactics.

9. Unit schools are fundamental to the Army. Battalion schools, for example, should teach specific subjects by separate classes for officers and NCOs. EM classes should be held at an appropriate time during the day to allow for the proper development of skills.

10. Some of the training models, such as the Battalion Training Model, may provide guidance on training programs for typical units and take some of the pressure off the commanders. However, because not all units are the same, the commander remains the best judge of the specific training needed by his unit.



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21 April 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with GEN John R. Guthrie, Commanding General,
DARCOM, 4 April 1978

General Guthrie made the following points during his discussion with the study group:

1. Be sure to take advantage of past experiences (World War II, Korea, etc.) learned in the development of training programs under wartime conditions.
2. In the 1973 Middle East War, the most impressive accomplishment in the area of training was the ability of the Israeli Army to take individually trained tank crewmen, commit them piecemeal, and still have effective crews on the battlefield. This is a tribute to their excellent Armor training programs.
3. Training should not be limited to battalions and brigades. For example, in World War II Churchill was impressed with the way the US Army was able to expand and still produce so many qualified Division, Corps, and Army commanders. CPXs are valuable, but they are not the answer in themselves. We need the experience gained from large exercises such as the Carolina Maneuvers to test the command & control and support of large forces. For that reason, REFORGER exercises are especially important. Battles in Europe and Africa were won by Bradleys, Pattons, Rommels and Guderians rather than by small units. Small units can sustain the first battle, and prevent a loss of that battle, but effective, higher level, tactical leadership is necessary to win.
4. ARTS would do well to study the philosophy of General Lesley McNair, who, as Chief of Army Ground Forces, was responsible for the training proficiency of millions of soldiers during the early stages of WW II.
5. During the early part of the Korean War, although some units were understrength and had a limited time to reach combat standards, many were able to train up to acceptable proficiency levels because of experienced NCOs. Where units achieved rapid train-up programs, it was essentially due to a first class NCO cadre.

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SUBJECT: Conference with GEN John R. Guthrie, Commanding General,
DARCOM, 4 April 1978

6. Generally, units experience more turbulence than is expected. Consequently, because some form of turbulence will always be present, training programs should accept and plan for it accordingly. Consider our units in Korea as an example of endemic turbulence and what measures are taken to reduce its affects on training and readiness. For instance, the mid-tour leave policy seriously disrupts training proficiency.

7. In the past, in well trained and highly proficient units, all officers were as proficient in the use and functioning of all pieces of organizational equipment as were the NCOs and men who were armed or operated the equipment. This concept is equally valid today despite the complexity of current weapons systems. Officers need to be more knowledgeable and trained in the fundamentals of today's weapons in order to extend the envelope on what weapon systems can actually accomplish. As an example of the problem, although both FIST and TACFIRE require more complicated training programs, it appears that officer courses involving these subjects will be shortened.

8. Integrated technical documentation and training (ITDT) is involving commanders in maintenance training. This is desirable because we need more discipline and command emphasis in training. However, we also need to show objectively what ITDT can do for us; i.e., a reduction from normative deadline rates or reduced spare parts usage. Constrained resources provide impetus to better training.

9. There seems to be too much tactical doctrine emphasis on defense. This may work in football games but not necessarily in war. Although there has been a reduced emphasis on unit competition due to integrity issues, a spirit of competition and offensive are highly important for morale, good training, and a winning attitude on the battlefield.

10. Good training and evaluation cannot be separated. Internal evaluations are important but more emphasis should be placed on Command Inspections such as CMMIs. Until some type of inspection system is reinstated, we really won't know if we have a combat ready force.

11. Training can be made interesting to troops if it is meaningful, presented at a level that is easily understood, and made progressive in nature.

12. AIT has been conducted satisfactorily in units in the past, but it is important that basic training be taught in the school. It is equally important that units exercise the proper leadership in keeping individuals motivated once they have joined a unit. In this regard, the fundamental principles of leadership (such as motivation and awareness of the individual) are immutable.

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13. Modified TOEs generally present problems, particularly in regard to the resulting variety of equipment for training and support requirements. Standard sets of equipment facilitate better training and easier logistical support from the standpoint of spare parts stockage and maintenance. As an example, although computation of the Authorized Stockage List (ASL) is prescribed specifically by an AR, each division employs a different procedure in determining its ASL. This presents severe challenges for a supporting supply system to be responsive to the entire force. The Israeli Armor force serves as an excellent example for standardized equipment and training techniques.

14. Some form of centralized training management is required since most battalion commanders are not experienced and need the benefit of some type of guidance. Leaders should learn the fundamentals of training before applying innovation by training "their" own way. We need to discipline the training system like the maintenance and logistics systems or it will not work. This includes getting senior commanders interested in training so it will receive its due share of resources.

15. There is a concern that the title "TRADOC System Manager" connotes a higher level of authority than does Project Manager. This is probably as a result of the SAFEGUARD and STANO System Managers who formerly reported directly to the CSA. Thus, the TSM is often thought of as senior to the PM when this was not the intent of the TSM program. TRADOC System Manager and DARCOM Project Manager relationships are very interpersonal, and care must be taken to ensure that their respective areas of responsibility are properly administered.



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23 May 1978

MEMORANDUM FOR RECORD

SUBJECT: Conference with General Donn A. Starry, Commander, TRADOC,
11 May 1978

General Starry made the following points during his discussion with the Study Group:

1. His concepts on individual and unit training, training management, and Commander and NCO responsibilities are outlined, respectively, in soldiers' manuals, ARTEPs, TC 21-5-7, and his article entitled "Sergeants' Business" in the May 1978 issue of Military Review.
2. The weakest part of our training support for the field is that provided NCOs. For example, the first line supervisor and the squad leader now are loaded down with job books and soldiers' manuals at various levels. TRADOC is working to streamline this system.
3. Parties responsible at each echelon must understand their share of the training load; it is equally important that they understand what share of the training responsibility is borne by other members of the trainer family. Sergeants must understand their responsibility for the conduct of individual training for their soldiers, and for evaluating the ability of their soldiers to perform at appropriate skill levels. Battalion commanders must understand their responsibilities as programmers of training--that is the setting of goals and allocating resources for goal accomplishment. In addition, the battalion commander is responsible for the collective training of his unit, and for integrating individual training needs of his soldiers into the collective training program. He does the latter by coordinating closely with the NCO chain of command, especially with the battalion command sergeant major, who is the senior official in the NCO individual training chain. Many battalion commanders and command sergeants major are simply not aware enough of their responsibilities in these areas through no fault of their own. Many have been away from troops for some years--especially the officers. The concepts set forth above, while not new, have largely been lost sight of in our Army over the last few years; we must recapture them if we are to be effective as trainers of our soldiers and the units of which they are part.

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SUBJECT: Conference with General Donn A. Starry, Commander, TRADOC
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4. TRADOC, in its role as trainer for the total Army, will increase emphasis on standardization, especially in collective unit training. Standardization tends to overcome the adverse effects of turbulence and is especially necessary at the small unit level. Major commanders have invited TRADOC to define standards more precisely, and we are working to do so.

5. Small unit leaders still complain that they are overwhelmed with administrative documents as well as manuals, instructions, and regulations, despite implementation of CABL. The battalion commander must work hard to relieve the paper burden at company level. A solution which has merit is the use of a battalion policy manual. Guidance for each subject is compressed to one page, on which is set forth the necessary regulations from all headquarters, and the battalion commander's policy on that subject, as appropriate.

6. Army authorization documents should be restructured to reflect the Army's need for more manpower in units during peacetime; allowing for a garrison strength of some percent above wartime strength (15 percent?). This would put sufficient people into the system to accommodate the personnel "rip-offs" that occur inevitably. We should recognize that this situation will always exist to some extent, and adjust for it by overstructuring the authorized strength of the unit. As a function of authorized strength, assigned strength should also be higher than is the present case. The Army is short NCOs in the top six grades because there is not enough money to pay for the authorized force. The Army should take the necessary steps to fully fund the authorized strength of the force.

7. While some recent training developments offer tremendous potential for training improvements, they are not being used. REALTRAIN is an example. REALTRAIN is not being used; it takes time to get out the equipment, set it up, and tear it down, and it is time-consuming to organize the training. The return is well worth the investment, but we must make that clear to the trainer.

8. "Training the trainer" is essential to our training success. The Basic NCO Course is sound, and the Primary NCO Course is coming along. The Advanced NCO Course needs revision--in its present form it missed the target. The Command Sergeant Major has been tasked with assembling the wisdom of our NCO Corps about what should be taught in ANCOC. That work will be finished this summer.

9. With regard to training extension course (TEC) equipment and new training publications, for the foreseeable future learning centers must be used. These centers must be located with and readily accessible to the troops. The battalion is the best level at which to consolidate. It is

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also possible to consolidate at brigade when physical circumstances permit. The learning center can also use education center funds to provide part of the personnel necessary to run the learning center. This is a little known, but important fact.


10. Time for training is probably adequate, although time is the scarcest resource. There is still a tendency for senior officers and their headquarters to eat up too much training time by prescribing time and resource-consuming activities which do not truly relate to mission readiness.

11. Our most serious training problems are with the Reserve Components. We still don't have a sound policy concerning what level of readiness we should demand of our USAR and NGUS units and individuals. We obviously cannot expect of them the same SQT and ARTEP performance levels we demand of our Active Army units--not in the same time at any rate.

12. The Army should have a serious look at its recruiting rationale. Men should be enlisting for more than simply a job. Belonging to a unit or serving the Nation should be the attractors. Even if the Army cannot maintain its authorized strength levels, the Army must possess a high quality, motivated force. We'll not have that if we continue to stress job opportunity as the first and only incentive.

13. Institutionalization of the results of the ARTS effort will have to be predicated on building a resource model and determining how to make it available to the field. TRADOC must eventually do for Reserve Components what ARTS is attempting to do for the Active Army. TRADOC will also look at the problem of training in the institution versus training in the unit. ARI should do more work in the areas of frequency of repetition and forgetting curves.

14. Personnel turbulence in units is our biggest problem. Until we find some way of ensuring some better level of crew and unit stabilization than we have now, we will never get very far in producing units that can use their weapons to maximum effect in coordinated, cohesive combat action.


H. B. QUEKEMEIER
Major, AG
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CHAPTER V

CONCEPT PAPER SEMINARS

1. Concept paper seminars were conducted from 21 to 24 February 1978, and included the following major subjects and attendees:

<u>SUBJECT</u>	<u>ATTENDEE</u>	<u>AGENCY</u>
a. Reserve Component Training, 21 Feb 78	MG John K. Singlaub	HQ, FORSCOM
	MG Merrill Evans	103d COSCOM
	BG Russell I. Berry	OCAR
	BG Howard G. Crowell, Jr.	HQ, TRADOC
	BG Harold Gwatney	39th Inf Bde (ARK ARNG)
	COL Carl L. Acree	NGB
	Dr. Russell F. Weigley	Temple University
b. Active Component Training, 22-23 Feb 78	LTG Volney F. Warner	XVIII Abn Corps
	MG James C. Smith	USA Aviation Center
	MG Charles K. Heiden	DA MILPERCEN
	MG John W. Seigle	HQ, TRADOC
	MG William J. Hilsman	USA Signal Center
	BG Richard S. Sweet	DA ODCSPER
	BG Dan H. Williamson, Jr.	HQ USAREUR
	BG Neal Creighton	DA ODCSOPS

c. Resource Cost of
Training, 24
Feb 78

MG Richard G. Fazakerly

HQ, FORSCOM

MG John C. Faith

DA ODCSOPS

BG Elton J. Delaune, Jr.

HQ, USAREUR

BG Corey J. Wright

COA

BG Max W. Noah

HQ, TRADOC

Dr. Ralph A. Ranauld

City University, NY

Dr. C. R. Vest

National Security
Industrial Association

2. Chapter V contains a summary of key points raised during the discussion of the above three subjects.

SUMMARY OF CONCEPT PAPER SEMINARS

A summary of major points discussed during the concept paper seminars appears below. The topics and issues listed do not imply overall consensus or agreement of participants.

1. Reserve Component Training.

a. Time is the critical resource constraint. An adequate amount of training time becomes especially important in light of the current threat and the increasing complexity of US weapon systems. Consideration should be given to the flexible use of training time to fit the needs of a particular unit as determined by its commander. The most serious challenges occur at the 40/50 skill levels and in officer skills because of the long lead time to develop these skills.

b. Care should be taken not to build up POMCUS stocks too fast else an excessive amount of this equipment is drawn from the RC community, and RC training readiness is reduced accordingly.

c. Lessons learned from previous mobilizations should be applied to future planning. For example, regulations should not allow personnel to be members of RC units in peacetime and also be able to leave the unit upon mobilization. Further, units should not be faced with reorganizational changes once they are mobilized.

d. The RC soldier is a dedicated American who will develop a sense of urgency and mission responsibility given proper incentives.

e. A unit's mission upon mobilization, and its organization for mobilization, should be clearly determined and used as a basis for both the unit's peacetime training program and the development of rapid train-up packets for use upon mobilization.

f. More emphasis is needed on aligning RC training strategy with those war plans which govern actual RC deployment. For example, use should be made of the Time Phased Force Deployment List in determining realistic RC training readiness objectives for appropriate units.

g. The current readiness reporting system does not provide the flexibility to allow different RC units to be trained to different levels of proficiency based upon their mobilization priorities. While it is not realistic to expect the same capability from AC and RC units, there are

disadvantages in utilizing different evaluation systems for these units. Until this dichotomy is resolved, the RC will not have a realistic training strategy.

h. RC training should not be limited by organizational levels since there are certain tasks which can be trained at all unit levels from section and squad to battalion, brigade, and division. Conversely, there are also tasks at each level which should involve training only during mobilization if a reasonable conservation of resources is to be realized.

i. The proper training of RC officers and NCOs cannot be overemphasized. History has shown that trained individuals can overcome obstacles during the stress of combat. This may involve key individuals to be absent from their unit, perhaps even during AT. However, in the long run this is for the best interests of the Army as long as a systematic training program for the unit is established.

2. Active Component Training.

a. The individual training system has had too many changes; more emphasis should be placed on making the present system work before any more changes are initiated.

b. Shadow schools offer effective training but they should be integrated more into the TRADOC training system.

c. Stability may not necessarily be the only solution to turbulence. Perhaps Army-wide standardization is the key. For example, the standardization established by Army aviation training programs permits aviators to move in and out of theaters and units with minimal relearning requirements. Each TRADOC school generally has the capability to address standardization and to concentrate on those skills which impact the most on turbulence. Turbulence has an adverse effect on proficiency, but it is not considered critical.

d. The Army spends a lot of time and money training soldiers who end up leaving the Service. One way to overcome this problem would be to concentrate institutional training more on general duties within a career management field and allowing specialized schooling to occur after the first reenlistment.

e. Past unit rotation and replacement policies generally have not worked well and have even caused turbulence to increase.

f. The capability to maintain a mobilization training base is reduced as more training is shifted to units.

g. Current training standards present little incentive to conduct good training.

h. Training should be oriented on a wartime system which can accommodate peacetime needs rather than be based on an efficient peacetime system which one hopes will be capable of transition to war.

i. The Army has no system or even rules of thumb as to what resources are required for training. There is a great need to cost the training currently being conducted.

j. Since the SQT came out first, and is tied to promotion, units have tended to emphasize individual training to the detriment of collective training.

k. An answer to a good training program is integrated training which makes use of the interface between individual and collective tasks. This idea needs to be explained, encouraged, and resourced.

l. More than the ARTEP is needed for unit training programs. It should be supplemented with EDRE, CALFEX, and personnel and logistics evaluations.

m. The Army is short officers and NCOs; any training system or program must take that into account.

n. It is proper to tell the commander what is expected of him; but we should not tell him how to train.

o. Critical tasks will vary from theatre to theatre and from mission to mission.

p. Estimates may have to be made in regard to the frequency of retraining. The analytical community may not be able to provide precise answers at this time.

q. The Army has a long way to go in articulating the present training system to the field.

r. The way to place true priority on training is through evaluation.

s. The ARTEP is an extremely good measure of effectiveness, particularly the subunit evaluation. ARTEP can and should be varied locally to include the differing tasks, conditions, and standards implied by various contingency missions.

t. Evaluation is a command function. It must not be removed from the chain-of-command. TRADOC should not supplant the chain-of-command; rather, evaluation teams should be extensions of the chain-of-command.

u. In the area of readiness reporting, the Army is not its own master. Changes to the URR should be made with care, and the system should remain compatible with job requirements.

3. Resource Cost of Training.

a. Data used to justify training resource requirements is not in the same form as is the data used to manage these resources.

b. Training resources include time, people, dollars, equipment, and facilities although the last two elements can generally be expressed in dollars.

c. The methodology for change proposed in Chapter III of the concept paper is headed in the right direction.

d. An analytical approach directed at required training resources is required to satisfy OSD, OMB, and Congressional analysts.

e. The methodology for expressing training resource requirements must be able to accommodate some subjective judgments of commanders.

f. TRADOC's combat developments activities should not be considered a cost of unit training.

g. Decisions made at different levels of management address different questions. Therefore, configuration of the resource data will change as it passes from one level of management to the other.

h. The issue of excluding MPA from the cost of unit training was not resolved.

i. The general procedure in the justification of training resources is to identify the training programs required for proficiency, then develop the resources required for the execution of those programs.

j. The training system should not emulate a maintenance check list system.

k. Battalion field training days have an understandable meaning, and they should be exploited as a means for communicating training resource requirements.

l. The rationale for training requirements should extend down to battalion level.

m. In defending the need for training resources, the battalion commander should not be overloaded with too many training tasks to accomplish.

n. ARTS should not go back to the old Army Training Program requirements-type system for developing a training resource methodology.

o. Cost factors for Classes V and IX need to be validated.

p. ARTEP 71-2 does not include all tactical training events, e.g., the meeting engagement should be included when determining training resource requirements.

q. The concern stemming from a training system based on "key plays" is that units may tend to train only on the key plays and ignore other training tasks.

r. The solid quantification of training requirements necessary for rigorous justification efforts necessitates the centralized identification of training tasks to include the frequency of retraining. Modifications by local commanders should be accommodated by whatever system is developed.

s. Training costs should be included in "life cycle" costing exercises.

t. The quality of personnel resources will have a significant impact on the resources of time and dollars required for training.

u. ARTS should not focus on the 1985 costing methodology to the extent that nothing is available for 1980 or 1981.

v. If training requirements can be identified, the cost of that training also can be determined.

w. As a first cut, ARTS should go after direct costs and police up indirect costs as time permits.

x. ARTS should concentrate on the variable portions of training costs.

y. The Unit Readiness Report is primarily a resource allocation document at DA.

z. Units should not be so proficient in the justification of training resources that too little focus is maintained on combat effectiveness and the art of winning battles.

CHAPTER VI

CONSULTANT GROUP MEETINGS

1. As noted on page I-25 of the study directive, the following Consultant Groups assisted the Army Training Study in the development of the study effort:

Education/Training

Test/Evaluation/Analysis

Costing/Resource Management

Reserve Component Training

Noncommissioned Officers

2. The Army 1985 Consultant Group, listed in the study directive, did not convene based upon the guidance of SAG I to transfer the TEA 85 effort to HQ TRADOC.

3. Chapter VI contains a chronological summary of meetings conducted with each of the above Consultant Groups.

SUMMARY OF CONSULTANT GROUP MEETINGS

A chronological summary of Consultant Group meetings, to include the purpose of each meeting, appears below:

1. 12 October 1977: The Costing/Resource Management Consultant Group met to review and discuss USAREUR and FORSCOM models for relating training resources to readiness.
2. 31 October to 3 November 1977: This initial meeting of the Education/Training and Test/Evaluation/Analysis Consultant Groups was held to brief members on the Army Training Study objectives, concepts, and methodology. Further, the meeting solicited information on recent or ongoing studies, tests, and analyses of value to the study group.
3. 14 November 1977: The Reserve Component Consultant Group was familiarized with ARTS and provided an opportunity to present Reserve Component training challenges from the viewpoint of their respective agencies.
4. 21 to 22 November 1977: The Costing/Resources Management Consultant Group met to provide input for the initial proposal for ARTS costing methodology.
5. 21 November 1977: The Noncommissioned Officers Consultant Group met to discuss the mission and objectives of ARTS and to provide the NCO perspective to "real-world" training challenges and various alternatives for solution of these challenges.
6. 12 to 14 December 1977: The Education/Training and Test/Evaluation/Analysis Consultant Groups met to review and critique the work plans of the six Systems Work Teams and receive update briefings on the ARTS concept papers.
7. 11 January 1978: The Reserve Component Consultant Group met for an update on ARTS, to obtain comments and discussion of planned tests and studies, and to provide an initial forum for discussion of the concept papers.
8. 9 February 1978: The Costing/Resource Management Consultant Group met to address the costing methodology developed by ARTS.
9. 24 April 1978: The Education/Training and Test/Evaluation/Analysis and Costing/Resource Management Consultant Groups received an update on ARTS activities, with primary emphasis on Training Effectiveness Analysis 78 and the Battalion Training Model.

10. 7 August 1978: Final meetings were conducted with the Education/Training, Test/Evaluation/Analysis, Costing/Resource Management, and Reserve Component Consultant Groups during which the major products of ARTS were discussed. Emphasis was given to a review of TEA 78, BTM, and study conclusions and recommendations.

CHAPTER VII

STUDY GROUP ORGANIZATION

Chapter VII outlines the Army Training Study Group organization to include officer areas of study responsibility and general study group expertise.

ARMY TRAINING STUDY GROUP ORGANIZATION

1. Study Group Members.

a. The Army Training Study Group consisted of 14 officers and three enlisted personnel (assigned as an overstrength to TRADOC) as follows:

<u>NAME</u>	<u>BRANCH</u>	<u>RESPONSIBILITY</u>
BG Frederic J. Brown	GO	Study Director
COL David A. Hufnagel	AD	Deputy Director
COL Edwin H. Burba	IN	Chief, Battalion Training Model (BTM) Team
LTC Gary W. Bloedorn	AR	Chief, Training Effectiveness Analysis (TEA) Team
LTC William B. Valen	SC	TEA Team Member
LTC Grant S. Green	IN	BTM Team Member - Special Projects
LTC Thomas R. Stone	FA	TEA Team Member
LTC Michael J. Hatcher	AR	BTM Team Member
LTC Henry F. Sobieski	OD	BTM Team Member
LTC Peter T. Zielenski	FA	TEA Team Member
MAJ Clarke M. Gillespie	SC	BTM Team Member
MAJ David S. Blodgett	IN	BTM Team Member
MAJ Henry B. Quekemeyer, Jr.	AG	Executive Officer
CPT Richard W. Johnson, III	AG	BTM Team Member
SSG Harold E. King	AG	Administration SGT
SP6 David C. Bowman	AG	Administration Team
SP5 Linda P. Elia	AG	Secretary

b. Mr. Thomas E. Kelly, III served with the Army Training Study from its inception. He came to the study on loan from the Center of Military History. In addition to serving as the military historian of the study group, he was responsible for the development and analysis of the Army Training Study Survey.

c. The following individuals were temporarily assigned to the study group during the dates indicated:

<u>NAME</u>	<u>AGENCY</u>	<u>DATE ASSIGNED TO ARTS</u>	<u>RESPONSIBILITY</u>
LTC (P) Doris L. Caldwell	MILPERCEN	20 Mar to 2 Jun 78	Advisor on women in the Army.
MAJ Richard Van Allen	USACSC	1 May to 15 Jun 78	ADP Advisor
Ms Diane M. Brown	CDEC	19 Jun to 27 Jul 78	TEA Advisor
Ms Emily K. Emerick	CACDA	1 Jun to 30 Jun 78	ADP Advisor
Mr. Fred Goldberg	USAES	14 Jun to 1 Oct 78	Editor
SP5 Gregory J. Wilson	TECOM	26 Jun to 25 Jul 78	Illustrator
PFC Tami L. Mackay	USAEC	4 Dec 77 to 1 Apr 79	Typist
PFC Valerie D. Boone	MILPERCEN	21 Feb to 1 Oct 78	Typist
PFC Evelyn F. Baldassare	MILPERCEN	18 Apr to 1 Oct 78	Typist
PFC Anne M. Green	MILPERCEN	8 Jun to 1 Oct 78	Typist

2. Study Group Experience (14 Military, 1 Civ Historian)

a. Command:

Brigade: 2
Battalion: 5
Company: 13

b. G-3/S-3:

Division G-3:	2	Asst Corps G-3:	1
Brigade S-3:	2	Asst Div G-3:	1
Battalion S-3:	4	Asst Bde S-3:	4
		Asst Bn S-3:	1

c. Education:

PhD:	2	SSC:	3
MS/MA:	14	CGSC:	13

d. Previous Assignment Directly Involved Training: 10

e. Reserve Component Advisor: 3

f. High Level Staff:

DA: 9
JCS: 3
White House: 1

g. Special Qualifications:

ORSA:	4	Tng Mgmt:	3	Manpower:	2
Modeling:	2	Tng Dev:	2	Costing:	2
ADP:	1	Tng Anal:	2	Logistics:	1
PPBS:	3	Historian:	2		

CHAPTER VIII

ARTS TRIP RECORD

This chapter contains a summary of major trips made by study members.

ARTS TRIP RECORD

<u>Date(s)</u>	<u>Destination(s)</u>	<u>ARTS Member</u>	<u>Purpose of Trip</u>
4 Nov	Strategic Studies Inst, Carlisle Barracks	COL Burba, Mr. Kelly	Review SSI Progress on 85-95 Environ Study Classified Research
7-8 Nov	HQ FORSCOM/TRADOC	LTC Hatcher	Concept Paper Research
10-11 Nov	CACDA/CATRADA Ft Leavenworth	COL Burba	Coordinate Support of ARTS Effort
14 Nov	HQ TRADOC	LTC Bloedorn	Coordinate TEA 85 actions
14-16 Nov	APG	LTC Sobieski	63C/H SWT Coordination
14-17 Nov	Strategic Studies Inst, Carlisle Barracks	LTC Stone	Conference, 85-95 Environment Study
15 Nov	Ft Lewis	BG Brown, MAJ Blodgett	Coordinate ARTS Initiatives
15-16 Nov	HQ TRADOC/Ft Eustis	LTC Green	Concept Paper Research
16-18 Nov	Ft Carson	LTC Hatcher	Coordinate ARTS Initiatives
16 Nov	CDEC, Ft Ord	BG Brown, MAJ Gillespie, MAJ Blodgett	Coordinate TIE Test
17 Nov	TRASANA, Ft Bliss	BG Brown, MAJ Blodgett	Coordinate Analytical Support
18 Nov	49th AD Austin, TX	BG Brown, LTC Zielenski	Present ARTS Overview
20-22 Nov	TRASANA WSMR	LTC Stone, LTC Sobieski	Determine WSTE Procedures
21 Nov	USASIGS Ft Gordon	MAJ Gillespie	Review Support Provided to ARTS

<u>Date(s)</u>	<u>Destination(s)</u>	<u>ARTS Member</u>	<u>Purpose of Trip</u>
22 Nov	DCSOPS/ACSI/INSCOM	LTC Zielenski	Discuss Mobilization Training
25 Nov	HQ FORSCOM	MAJ Gillespie	Attend National Training Center Briefing
27-30 Nov	Ft Knox	LTC Bloedorn	Coordinate Armor SWT Activities
28-29 Nov	HQ FORSCOM	Mr. Kelly, LTC Zielenski	Concept Paper Research
29 Nov-2 Dec	USAFAS, Ft Sill	LTC Zielenski	Coordinate FA Tests For TEA 78
1 Dec	HQ FORSCOM	BG Brown, LTC Green	Discussions with GEN Kroesen
1 Dec	Air University Maxwell AFB	LTC Valen	Concept Paper Research
4-5 Dec	HQ TRADOC	LTC Sobieski	DPS 40
4-8 Dec	USAREUR	BG Brown, LTC Green	Coordinate ARTS Initiatives
4-8 Dec	TRASANA, WSMR	LTC Hatcher	Coordinate TEA 78, Research Data
5-6 Dec	Ft Leavenworth/Bliss	MAJ Blodgett	Coordinate TEA 78
7-8 Dec	Ft Eustis/Gordon	MAJ Gillespie	Review ARTS Support, Concept Paper Research
13-14 Dec	Naval Postgraduate School Monterey, CA	COL Hufnagel	Participate in Military Operations Research Society Symposium on Training
14-15 Dec	Ft Lewis	BG Brown, MAJ Blodgett	Coordinate ARTS Initiatives
14-15 Dec	Ft Eustis	LTC Bloedorn	Attend TRADOC Conference
14-16 Dec	49th AD Austin, TX	BG Brown, LTC Zielenski	Coordinate TEA 78 Testing
15 Dec	Ft Leavenworth	Mr. Kelly	Coordinate ARTS Initiatives

<u>Date(s)</u>	<u>Destination(s)</u>	<u>ARTS Member</u>	<u>Purpose of Trip</u>
16-17 Dec	Ft Carson	LTC Hatcher	Coordinate ARTS Tests
19 Dec	HQ TRADOC	BG Brown, COL Hufnagel, COL Burba	SAG I
21 Dec	HQ FORSCOM	MAJ Gillespie	Attend National Training Center Briefing
28 Dec	Dep Asst Sec (Res Aff) M&RA	LTC Zielenski, Mr. Kelly	ARTS Overview & RC Training Discussion
6-9 Jan	Ft Bliss/Leavenworth	Mr. Kelly	Research Initiatives
8-9 Jan	Florida State Univ	LTC Valen	Concept Paper Research
8-13 Jan	HQ TRADOC	COL Burba, LTC Bloedorn, LTC Sobieski, LTC Stone	Coordinate TEA 85
10-13 Jan	HQ TRADOC, ATB TDI, ITED	LTC Valen	Concept Paper Research
11 Jan	Ordnance School APG, MD	BG Brown	Coordinate Testing
13-14 Jan	Florida State Univ	LTC Valen	MGMT Presentation, Coordinate Assistance
19-20 Jan	HQ TRADOC	LTC Bloedorn	Coordinate TEA 85 Test Scheduling
26-28 Jan	HQ TRADOC	LTC Bloedorn	Coordinate TEA 85 Test Scheduling
31 Jan-2 Feb	HQ TRADOC	LTC Bloedorn, LTC Sobieski	Outline TEA 85 at TRADOC TSARC
2 Feb	Ft Leavenworth	Mr. Kelly	ARTS Briefing
6-8 Feb	Leesburg, VA	ARTSG	ARTSG Work Session Xerox Training Facility
9-10 Feb	Washington, DC	LTC Valen	ARI Workshop
14 Feb	HQ TRADOC	ARTSG	SAG II

<u>Date(s)</u>	<u>Destination(s)</u>	<u>ARTS Member</u>	<u>Purpose of Trip</u>
23-24 Feb	HQ FORSCOM	LTC Stone, Mr. Kelly	Concept Paper Research
23-24 Feb	TDI	LTC Valen	Conference
26 Feb - 1 Mar	Israel	BG Brown	Observe Israeli Army Training
27-28 Feb	Ft Eustis	LTC Valen	ATB Meeting
4-9 Mar	Germany	BG Brown	Observe German Army Training
14-20 Mar	Ft Benning/Monroe	MAJ Blodgett	Coordinate TOW SWT/BTM
14-15 Mar	Ft Eustis	LTC Stone, LTC Valen	ATB Meeting
14-16 Mar	HQ FORSCOM	LTC Hatcher	BTM Research
14-17 Mar	HQ FORSCOM/TRADOC	LTC Sobieski	Coordinate BTM with TMCS Developers
15-16 Mar	Ft Gordon	LTC Valen, LTC Stone, MAJ Gillespie	Coordinate with O5C SWT
15-21 Mar	Ft Bliss/WSWR	LTC Bloedorn	Coordinate TEA 78 Test
15-21 Mar	Ft Sill/Bliss	LTC Zielenski	Observe Cannon Crew Turn- over & Coord TEA 78 Tests
16-20 Mar	Ft Gordon/Benning	LTC Valen, LTC Stone, MAJ Gillespie	Review Plans for O5C Testing
20-21 Mar	APG, MD	LTC Stone, LTC Sobieski	Coordinate TEA 78
27-28 Mar	Ft Stewart	LTC Bloedorn	Observe 11E10 Post Graduate Testing
27-29 Mar	Ft Ord	LTC Green	Collect Turbulence Data and Coord ARTS Effort
27-29 Mar	Ft Carson	MAJ Blodgett	BTM Data Collection
28-31 Mar	USAREUR	MAJ Gillespie	Coordinate with 3AD on BTM Survey

<u>Date(s)</u>	<u>Destination(s)</u>	<u>ARTS Member</u>	<u>Purpose of Trip</u>
29-30 Mar	Ft Leavenworth	BG Brown, Mr. Kelly	IUS Conference
2-4 Apr	Ft Gordon	LTC Valen	Coordinate with O5C SWT
2-4 Apr	HQ TRADOC	LTC Hatcher	Coordinate Contractor Change Order
4-5 Apr	Ft Carson	BG Brown	Observe Tank Crew Turbulence Test
5-7 Apr	Ft Bliss	LTC Bloedorn	Coordinate with Redeye SWT
15 Apr-6 May	USAREUR	LTC Stone	Administer BTM Survey Ob- serve Testing, 1AD & 3AD
16-17 Apr	Ft Gordon	LTC Valen	Coordinate with O5C SWT
17-18 Apr	Ft Stewart	LTC Valen	Coordinate with 25ID
18-21 Apr	Ft Gordon	LTC Valen	Coordinate with O5C SWT
18 Apr	HQ TRADOC	BG Brown, COL Hufnagel, COL Burba, LTC Bloedorn, LTC Caldwell, MAJ Blodgett	SAG III
20 Apr	Ft Lee	COL Hufnagel	Brief CG and staff on ARTS
20-21 Apr	Ft Knox	LTC Hatcher	Coordinate BTM Survey
23-26 Apr	Ft Stewart	LTC Valen	Observe O5C Testing
24-26 Apr	Ft Bragg	LTC Zielenski	Observe Redeye Testing
27-28 Apr	Dallas, TX	BG Brown, Mr. Kelly	IUS Conference
29 Apr-4 May	USAREUR	BG Brown	Observe Testing, 3AD
29 Apr-6 May	USAREUR	LTC Bloedorn, LTC Zielenski	Administer BTM Survey Observe Testing, 1AD & 3AD
29 Apr-13 May	USAREUR	MAJ Gillespie	Administer BTM Survey, Collect Costing Data 3AD, V Corps, USAREUR

<u>Date(s)</u>	<u>Destination(s)</u>	<u>ARTS Member</u>	<u>Purpose of Trip</u>
30 Apr-5 May	Ft Carson	COL Burba, LTC Hatcher, LTC Valen	Administer BTM Survey
1-2 May	Ft Carson	Mr. Kelly	Administer BTM Survey
1-4 May	Radford, VA	LTC Green	Coordinate Data Effort
4-5 May	Leavenworth	Mr. Kelly	Administer BTM Survey
8-11 May	SMA, Ft Bliss	LTC Bloedorn	Administer BTM Survey
11-12 May	AWC, Carlisle Barracks	BG Brown, COL Burba, Mr. Kelly	Administer BTM Survey
14-15 May	Ft Gordon	LTC Valen	Coordinate with O5C SWT
15-19 May	Ft Carson	LTC Zielenski	Evaluate Unit FO Training
16-17 May	Atlanta, GA	LTC Valen	Job Aids Seminar
22-26 May	Ft Carson/ Hunter-Liggett	LTC Bloedorn	Observe TEA 78 Testing
30-31 May	Ft Carson	LTC Bloedorn	TEA Test Coordination
31 May	HQ TRADOC	BG Brown, COL Hufnagel, COL Burba, LTC Hatcher, MAJ Blodgett	SAG IV
31 May-2 Jun	Leesburg, VA	ARTSG	ARTSG Work Session Xerox Training Facility
4-9 Jun	Ft Benning/ Gordon/Carson	LTC Stone	TEA Report Coordination
4-8 Jun	Ft Sill/Bliss/ WSMR	LTC Zielenski	TEA Report Coordination
5-8 Jun	Ft Knox	LTC Bloedorn	TEA Report Coordination
13 Jun	HQ TRADOC	BG Brown, COL Burba	Meeting with DCST

<u>Date(s)</u>	<u>Destination(s)</u>	<u>ARTS Member</u>	<u>Purpose of Trip</u>
19-21 Jun	Ft Carson	BG Brown	Obtain views on Training Packages
22-24 Jun	USAREUR	BG Brown	Obtain views on Training Packages
26-29 Jun	Ft Bliss/WSMR	LTC Bloedorn	TEA Report Coordination
20 July	FORSCOM	BG Brown	Brief LTG Shoemaker
8 Aug	HQ TRADOC	ARTSG	SAG V
6-9 Sep	HQ USAREUR	COL Hufnagel, COL Burba, LTC Valen	Present ARTS Briefing to GEN Blanchard

Chaper IX

BUDGET AND EXPENSES

This chapter summarizes expenses in support of the study effort for FY 1978. Total estimated expenses for FY 1978 were \$282,100 dollars. Also included are projected expenses for FY 1979 as a result of the ARTS follow-on effort approved at SAG V.

FY 1978
ESTIMATED AND PROJECTED EXPENSES
(Rounded to Nearest \$100)

Travel/per diem (includes liaison officer travel)	\$85,600
Civilian salaries	16,000
Equipment rental	
Word processing equipment	10,800
Xerox machine	10,600
Dictating/transcribing equipment	600
Air conditioners	400
Lease car	1,000
Telephone installation	3,700
Supplies	6,100
Telephone (WATTS and commercial calls)	1,500
TOTAL	<u>136,300</u>
Contracts/services	
TRASANA (testing, model development, and coordination visits)	29,000
CATRATA (for use of CAMMS in support of ARTS)	15,100
CDEC (participation in tank crew turbulence test)	2,700
MERADCOM (ADP services)	67,200
11E test, USAREUR (transportation and lodging)	3,200
ARTSG conferences, Leesburg, VA	3,000
Actuarial Research Corporation (time ratio test)	7,900
Illustration services	8,000
Editorial services	2,900
Binders	700
Actuarial Research Corporation (BTM survey analysis)	1,500
MERADCOM (graphics services)	1,700
TAGO (typing services)	700
Printing plant (overtime)	2,200
TOTAL	<u>145,800</u>
GRAND TOTAL	<u>282,100</u>

FY 1979*
PROJECTED EXPENSES
(Rounded to Nearest \$100)

Travel/per diem	\$51,000
Computer services	110,000
Civilian overtime	3,000
Equipment rental	12,500
Supplies	3,900
Lease car	<u>1,800</u>
TOTAL	182,200

*For period 1 October 1978 - 1 June 1979

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